

Midwestern State University
Robert D. & Carol Gunn College of Health Sciences & Human
Services

Department of Radiologic Sciences

Course Number: NURS/RADS/RESP/SOWK 4123 x 10 3 credits Spring 2019
Course Title: Data Analysis
Instructor: Dr. Jennifer Anderson, EdD, RRT, RRT-NPS
Bridwell Hall, Office 301C
Office: (940) 397.4656
Email: jennifer.anderson@msutexas.edu

Communication with Instructor

Contact information for the instructor is listed at the beginning of this syllabus. Email is the instructor's preferred mode of communication. 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.

The student should also periodically check the News section within D2L for course updates and other important information.

Course Overview

The focus of this course is to provide an interdisciplinary data analysis class specifically for health sciences and human services majors using techniques and data structures relevant to clinical investigations. General topics include choosing correct procedures and using statistics to understand clinical data. Specific topics include but are not limited to basic statistics, measures of correlation and difference, hypothesis testing and bias, confidence intervals, reliability and validity, significance, power analysis, levels of evidence, sample size and distribution, assessing effects of treatment, quality improvement, relative risk and relative risk reduction, and odds ratio.

Course Objectives

Upon completion of this course, the student will:

1. Use the measures of central tendency and measures of dispersion.
2. Use concepts of estimates, relative risk, relative risk reduction, and odds ratios.
3. Use tests that analyze frequencies, correlations, and differences.

4. Understand the basic concepts of measurement, sampling, sample size, and sample distribution.
5. Grasp the general principles of processing and presenting data.
6. Explain, calculate, and interpret inferential statistics including probability and hypothesis testing.
7. Correlate the concepts of probability and the normal distribution curve.
8. Understand the factors that form the basis for hypothesis and statistical testing.
9. Apply statistical outcomes to processes of quality improvement.
10. Use statistical outcomes to evaluate effects of treatment.

Textbook

Fowler, J., Jarvis, P., & Chevannes, M. (2002). *Practical statistics for nursing and health care*. West Sussex, Eng: Wiley Publisher. [ISBN 978-0-471-49716-5]

Teaching Strategies

- Online delivery with asynchronous interactions between students and teacher, interactive discussions, group application activities, and a comprehensive final examination.

Attendance

This is an online course, and as such, there are no mandatory sessions. However, the students should be vigilant in checking their email and logging onto D2L. Regular checks will ensure messages from the instructor and fellow students are received in a timely manner. This course is on a schedule that will be strictly adhered to (see table below). The instructor will be available to meet face-to-face with any student who is interested. Please email the instructor to schedule an appointment.

Evaluation

Discussion Board	10%
Quizzes	30%
Project Assignments	35%
Comprehensive Final Exam	25%

Grading Scale

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

Last Day for “W”, 4:00 p.m. on March 25 – Drops after this date will receive grades of “F.” . 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.”

Class Activities and Assignments

Assignments are a significant portion of the grade and represent application of the material studied. All assignments are to be submitted as instructed in each unit. Points will be deducted for improper format. Proper APA format must be used when appropriate. Plagiarism will be graded harshly. Assignments must be received prior to the deadline. Late assignments are not be accepted beyond the deadline. A zero will be recorded for assignments not submitted or meeting the final deadline. **All assignments must be written at the baccalaureate level and will be graded for accuracy, completeness, quality, spelling, grammar, punctuation, and integrity.**

- **Independent Reading Assignments**

Unit 1: Chapters 1 and 2

Unit 2: Chapters 3 and 4

Unit 3: Chapters 7 and 8

Unit 4: Chapter 9

Unit 5: Chapters 10 and 11

Unit 6: Chapters 12, 13, and 14

Unit 7: Chapters 15 and 16

Unit 8: Chapters 5 and 6

*Supplemental notes are provided within D2L to complement the reading assignments.

- **Discussion Board (10%)**

The discussion board is a mandatory component in this course. Assignments are made specifically for this board. Students are expected to write formally (no shorthand or text messaging abbreviations) and use APA format and referencing when appropriate. Thoughtful responses, constructive critique of fellow students, and meaningful participation are expected. Keep in mind the discussion board is a formal assignment and part of your final grade. Review for the grading rubric for each discussion board assignment.

- **Quizzes (30%)**

In each of the units, a quiz will be administered within D2L. These quizzes are open book, open notebook, but you will only have one hour to complete them and must be prepared as there will not be enough time to research every answer. Quizzes must be completed prior to the expiration dates listed in this syllabus.

Quiz grades and answers will be released after the deadline of each quiz. Specific questions regarding the quizzes may be addressed to the instructor. Quizzes will not be made up if missed and a zero (0) will be recorded. No extra credit activities are available.

If students have technical difficulties during a quiz, they should use the 'Help' link located on the top toolbar within D2L to contact the MSU Information Systems Support Staff and send an email to the course instructor explaining what happened.

- **Dropbox Project Assignments (35%)**

Units 2, 3, 4, 6, and 7 each contain a unique group project assignment. Specific instructions regarding each assignment can be found in the unit supplemental notes within D2L. It is very important to read the instructions carefully and review the grading rubric for each assignment as well.

If a student fails to participate in the group assignment, then that student's grade *will be affected by assigning a "0" for that assignment.* **All assignments must be submitted via the appropriate dropbox within D2L by the group leader using the Workgroup Activity Assignment Form.**

- **Final Exam (25%)**

The final exam is a timed, comprehensive exam consisting of 40 multiple choice questions. The students will have 90 minutes to complete the exam. The Radiologic Sciences program uses an off-site proctoring company called Proctor U. Students must schedule the final exam through Proctor U by October 14, 2016. Please read the Proctor U instructions under Course Introduction. There is a minimum \$25 charge for the exam and the price will increase the later the exam is scheduled.

- **Proctor U Specifications:**

- PC Users: A well-working computer running Windows XP or higher with 1024 MB of RAM or higher.
- Mac Users: A well-working computer running Mac OS X or higher.
- A web cam with 640x480 video pixel resolution (web cams built into laptops or monitors are acceptable).
- Headphones or working speakers connected to the computer.
- A microphone connected to the computer (your web cam or laptop may already have one built into it).
- A reliable high speed internet connection (minimum 768 Kbps/384 Kbps Download/Upload).

- A web browser with Adobe Flash Player installed.

Tentative Course Schedule

Date	Assignment
Saturday, January 12	Course opens
Sunday, January 20	Unit 1 Quiz due by midnight Unit 1 Discussion Board due by midnight
Sunday, February 3	Unit 2 Quiz due by midnight Unit 2 Workgroup Assignment due by midnight
Sunday, February 17	Unit 3 Quiz due by midnight Unit 3 Workgroup Assignment due by midnight
Sunday, March 3	Unit 4 Quiz due by midnight Unit 4 Workgroup Assignment due by midnight
Sunday, March 17	Unit 5 Quiz due by midnight Unit 5 Discussion Board due by midnight
Sunday, April 7	Unit 6 Quiz due by midnight Unit 6 Workgroup Assignment due by midnight
Sunday, April 21	Unit 7 Quiz due by midnight Unit 7 Workgroup Assignment due by midnight
Sunday, April 28	Unit 8 Quiz due by midnight
Monday, April 29	Final Exam opens at 8 am
Friday, May 3	Final Exam closes at midnight

**All times are Central Standard Time (CST).

Concealed Handgun Carry

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, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at <https://mwsu.edu/campus-carry/rules-policies>.

If you have questions or concerns, please contact MSU Chief of Police Patrick Coggins at patrick.coggins@mwsu.edu.

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 Counseling Center, Clark Student Center Room 168 (940)397-4140, <https://mwsu.edu/student-life/disability/>. 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.

Honor System

NURS/RADS/RESP/SOWK 4123 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 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.

Many components of NURS/RADS/RESP/SOWK 4123 are designed to be highly interactive with students helping each other learn. Students are encouraged to take full advantage of many resources available including online D2L course resources, Internet sites, other textbooks and journals, faculty, and peers when answering objectives. This interactive collegial learning environment is conducive to life-long learning.

Specific components of NURS/RADS/RESP/SOWK 4123 are designed to represent the efforts of each student individually and are not to be shared or copied (plagiarized) from other sources. These components include the discussion board, group activities, module quizzes, and the comprehensive final exam. When students submit their efforts for grading, they are attesting they abided by this rule.

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. Papers and other assignments may be submitted to an external agency for verification of originality and authenticity.

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, the student should ask the instructor for clarification. If students are guilty of academic dishonesty, a grade of zero (0) may be given for the quiz, assignment, etc. Cases may also be referred to the Dean of Students for possible dismissal from the university.

Note: 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 not limited to: the right to reproduce the student's work product in order to verify originality and authenticity as well as for educational purposes. Specifically, faculty may submit student papers and assignments to an external agency to verify originality and authenticity to detect for plagiarism.

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. Director of Interdisciplinary Studies
 - a. Dr. Beth Vealé (940) 397.4611
2. Department Chair
 - a. BSRS, Ms Debra Wynne 940) 397.4608
 - b. BSRC, Dr. Jennifer Anderson (940) 397.4656
 - c. BSN, Dr. Kathleen Williamson (940) 397.4610
3. College Dean, Dr. Jeff Killion (940) 397.4594
4. Dean of Students, Matthew Park (940) 397.6273