Foundations of Statistics
NURS 6321.060
Spring 2025

Scheduled Class Days and Times: Online

Instructor's Name: Kevin Gosselin, Ph.D., M.Ed., M.S.
Office: Virtual
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Office Hours: Virtual Office Hours: Wednesday from 9:30 AM – 12:30 PM CST or by appointment for phone call or video conference. Additional days and times may be arranged upon request. Please email faculty to make arrangements/obtain Zoom link.

Course Description: This course provides a comprehensive exploration of fundamental statistical and measurement principles. The primary aim is to establish a robust foundation for advanced research and statistics coursework at the graduate level. Core topics encompass populations, sampling methodologies, hypotheses, variance, measures of central tendency, estimation techniques, error, and statistical inference.

Prerequisites: None

Student Learning Outcomes:

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

1. Explain fundamental principles regarding measurement and statistics.
2. Demonstrate the application of statistical concepts in empirical research.
3. Articulate the proper usage of statistical terminology verbally and in written communication.
4. Evaluate the utilization of basic statistical principles within a research contexts.

Required Textbooks and Readings:

1. Gravetter, F., Wallnau, L., Forzano, L., & Witnauer, J (2020). Essentials of Statistics for the Behavioral Sciences (10th ed.). Belmont, CA: Thomson Wadsworth.

Recommended Textbooks and Readings:

1. Field, A. (2017). Discovering statistics using IBM SPSS: North American edition, 5th edition. Thousand Oaks, CA: Sage. Publications.
2. Pallant, J. (2016) SPSS Survival Manual, 6th edition. New York: McGraw Hill Education
3. Bannon, W. (2013). The 7 steps of data analysis. Stats Whisperer Press. ISBN 978-0-615-85729-9
4. American Psychological Association. (2019). Publication manual of the American Psychological Association (7th ed). APA. ISBN-13: 978-1-4338-3216-1.

Special Course Notes:

1) This course requires you to use IBM SPSS Statistic Standard Grad Pack. Licenses (6 and 12 month) are available through the link (http://www.onthehub.com/spss).

Assignments and Weights/Percentage/Point Values (Should equal 100%)

1.	Participation	5%
2.	Discussion boards	15%
3.	Quizzes	20%
4.	Statistical Exercise Assignments	30%
5.	Simple Regression Assignment	15%
6.	ANOVA Assignment	15%

Grading Scale:

Specific guidelines and grading criteria for all assignments are in the Modules. Final grades for the course will be determined based upon the following point assignments:

A - 90-100
B - 80-89
C - 70-79
D - 60-69
F - Below 60

Grades will not be rounded when calculating the average (79.5 is not rounded to 80, and 89.5 is not rounded to 90). Students are required to achieve an average of 80% (B) to complete the course successfully.

Academic Integrity: Cheating of any kind, as defined in Section 8 of the UT Tyler Manual of Policies and Procedures (MOPP) for Student Affairs (https://www.uttyler.edu/mopp/), will not be tolerated. Consequences may include:

- reprimand
- exam failure
- course failure
- expulsion from the Nursing program
- expulsion from the University

- other consequences as assigned

Exam and homework materials, questions, and problems are the intellectual property of faculty, UT Tyler, or publishers.

- These materials may not be distributed without permission.
- Distributing or uploading them to online resources destroys the integrity of the assignment and the course, allowing others an unfair advantage by letting them view the materials.
- Uploading these materials to online resources is a violation of UT Tyler's academic misconduct policies and may result in formal conduct charges.
- Sanctions for uploading or otherwise divulging the contents of these materials can include:
  - a reduced or failing grade on an assignment
  - a reduced or failing grade for the course
  - removal from the Nursing program
  - removal from UT Tyler

Late Policy: 5% will be deducted each day an assignment is past due unless prior arrangements have been made with your course faculty. Extenuating circumstances may apply.

Repeating a Course: Students repeating this course may not use previously submitted assignments nor utilize the same patients for an assignment. Submitting the same or slightly modified assignments from previous semesters is considered self-plagiarism and is subject to academic discipline, including failing the assignment or the course.

Attendance and Make-up Policy: Attendance/participation is expected. Make-up for exams, quizzes, assignments, and missed clinical time is at the instructor's discretion.

Graded Course Requirements Information:

Participation: Attendance and participation is expected for the course. This requires posting to discussion boards, regular reading of the assigned material, and completion of assignment (5% of your grade).

Discussion Boards: Students are expected to share ideas through the discussion board assignments. These ideas should be gained from the readings and literature by noting the source when appropriate and interpreting through your own words. It is also expected that you will use a more complex thought process to dissect and analyze what you read in the literature and in the thoughts of fellow students (15% of your grade).

Assignments (Statistical Exercises): These assignments will provide opportunities fro you to demonstrate your understanding though solving problems on statistical topics. Additional information will be provided in class (30% of your grade).

Assignment 1 (ANOVA): This assignment allows you to demonstrate your knowledge of analysis of variance through submission of an output file with the analysis and write up of the results in APA format. Additional information will be provided in class (15% of your grade).

Assignment 2 (Simple Regression): This assignment allows you to apply your understanding of simple linear regression and the mathematical underpinnings of the generalized linear model through submission of an output file with the analysis and write up of the results in APA format. Additional information will be provided in class (15% of your grade).

Quizzes: Students will take two quizzes over material covered in the course. Quizzes may by taken twice and the highest score will be counted. The timeframe and associated deadlines for each of the quizzes are provided below on the course schedule (20% of your grade).

Please Note: Detailed information along with grading rubrics for course assignments will be provided in Canvas.

Important Course Dates:

Classes Begin: January 2, 2025
Census Date (withdraw without penalty): January 14, 2025
Last Date to Withdraw: March 11, 2025. Students, please notify your course faculty and contact your advisor.
Calendar of Topics, Readings, and Due Dates:

NURS 6321 Course Calendar – Spring 2025				
Course Schedule				
Week #	***Date***	***Class Topic***	***Reading (Gravetter & Wallnau)****	***Assignments Due***
1	01/13-01/19	Introduction and Frequency Distributions	Chs. 1 and 2	Discussion Board 1
2	01/20-01/26	Central Tendency and Classical Test Theory	Ch. 3	SE Assignment 1 Holiday: January 20th – No classes
3	01/27-02/02	Variability	Ch. 4	SE Assignment 2
4	02/03-02/09	z-scores	Ch. 5	SE Assignment 3

5	02/10-02/16	Probability	Ch. 6	Quiz 1
6	02/17-02/23	Probability and Samples	Ch. 7	Discussion Board 2
7	02/24-03/02	Introduction to hypothesis testing	Ch. 8	No assignment
8	03/03-03/09	Introduction to the t statistic	Ch. 9	SE Assignment 4
9	03/10-03/16	t-test for two independent samples, t-test for two related samples	Chs. 10 and 11	SE Assignment 5
	03/17-03/23	Spring Break		No classes
10	03/24-03/30	Ch. Introduction to Anova	Ch. 12	Quiz 2
11-12	03/31-04/13	Ch. Two-Factor Anova	Ch. 13	ANOVA Lab Assignment
13-14	04/14-04/27	Correlation and Regression	Ch. 14	Simple Regression Assignment
15	04/28-05/02	Chi-Square and Summary	Ch. 15	Discussion Board 3

* Assignments, quizzes, and discussion board posts are due by 11:59 p.m. central time on Sunday of the week shown.

Statement on Arificial Intelligence

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the

guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, AI is encouraged during the course, and appropriate acknowledgment is expected.

Students can use AI platforms to help prepare for assignments and projects. You can use AI tools to revise and edit your work (e.g., identify flaws in reasoning, spot confusing or underdeveloped paragraphs, or correct citations). When submitting work, students must identify any writing, text, or media generated by AI. In this course, sections of assignments generated by AI should appear in a different colored font, and the relationship between those sections and student contributions should be discussed in a cover letter that accompanies the assignment when submitted.

School of Nursing Policies and Additional Information:

https://www.uttyler.edu/nursing/college/student_guide_and_policies.php

Student Resources and University Policies are provided in Canvas.

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