

The University of Texas at El Paso
School of Nursing
Doctor of Nursing Practice Program

NURS 6319
Applied Statistics for Health Providers

Spring 2022

**The University of Texas at El Paso
School of Nursing
Doctor of Nursing Practice Program**

**Course Syllabus: NURS 6319
Applied Statistics for Health Providers
Spring 2021**

Course: NURS 6319 – Applied Statistics for Health Providers

Placement in Curriculum: Doctor of Nursing Practice

Credit: 3-0 (3 Classroom)

Course

Pre-requisites: Department approval

Course Description:

This course provides an overview of the logic and appropriate use of descriptive and inferential statistical techniques most commonly reported in the research literature of the health professions. Topics include hypothesis testing, statistical power and effect size, and a review of parametric and nonparametric approaches. Across topics, emphasis is placed on 1) the underlying logic of statistical assumptions, approaches and procedures, 2) interpretation of research findings and implications for practice, and 3) evaluation and critical appraisal of published research.

Class Location/Time: Class meets via Zoom (link in Blackboard):

Date	Day and Time	Location
1/14/2021	Friday 1200 - 1930	NURS 215
2/11/2021	Friday 1200 - 1930	NURS 215
3/11/2021	Friday 1200 - 1930	NURS 215
4/8/2021	Friday 1200 - 1930	NURS 215
4/29/2021	Friday 1200 - 1930	NURS 215

Faculty:	Franchesca E Nunez, PhD, RN
Office:	HSN 349
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Office Hours:	Mondays: Virtual 0900 – 1000; On Campus 1000 - 1230

Course Objectives:

At the end of the course the student will be able to:

1. Analyze different statistical techniques for use in clinical practice
2. Apply principles of evidence-based practice in evaluating research questions, research design, clinical interventions, and research findings
3. Critically evaluate published research and apply to clinical practice
4. Develop and evaluate new practice approaches based on evidence-based theories from nursing and other disciplines

Teaching Strategies:

A variety of strategies including discussion, demonstrations, case studies, seminars, group activities, and lectures will be used throughout the course. Guest scholars may be invited to share their expertise to enrich the learning experience.

Student Responsibilities:

Attendance is expected at all classes. Students are expected to be fully prepared for each class, and to actively participate in all discussions. All course work is expected and due at the time designated. Students needing additional time due to unexpected circumstances should contact me ASAP.

Academic Integrity:

Students are accountable for all work submitted or presented for evaluation. While collaboration with others is encouraged, collaboration during any testing situation will be considered cheating, as will submitting work in which you did not directly participate in developing. Use of information from publications/media productions without proper acknowledgement and citation is considered plagiarism. Penalties for plagiarism and/or cheating will be imposed according to the regulations of The University of Texas at El Paso. For more information: <https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html>

Center for Accommodations and Support Services:

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the UTEP Center for Accommodations and Support Services (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, email them at cass@utep.edu, or apply for accommodations online via the CASS portal accessible here <https://www.utep.edu/student-affairs/cass/>.

Technical Assistance:

The University of Texas at El Paso offers complete technical information and helpdesk support at <http://admin.utep.edu/Default.aspx?alias=admin.utep.edu/ts>

Textbook:

Heavey, E. (2018). (3rd Ed.) Statistics for Nursing. Jones & Bartlett Publishers.
ISBN-13: ISBN-13: 978-1284142013



Additional readings, resources, and online “interactivities” will be assigned throughout the semester and will be provided electronically.

EVALUATION

Reflection/Response to Readings (300 points)

Prior to each class meeting, students will turn in a one-page (single-spaced) reflection of the assigned reading(s) for that class. Details will be provided at the end of each class, and the reflections will be turned in on Blackboard by Wednesday night prior to the next class meeting. The purpose of these reflections is to facilitate meaningful discussion in class of the challenges and insights encountered through the readings. Reflections will be evaluated on a S/U (satisfactory/unsatisfactory) basis, with missing reflections receiving a “U” grade and 0 points.

Reflection/Response to Readings - Evaluation Criteria	Possible Points
4 reflection/response to reading assignments @ 75 points each	300
Total Possible Points	300

Class Engagement & Participation (350 points)

The diversity of experience, expertise, and clinical practice setting of students in this class contributes to the overall learning environment. Your engagement in all classroom activities is an important component of your grade. Students are expected to attend all class meetings and participate in all classroom activities. Participation includes expanding on others' ideas, relating challenges in the assigned readings to challenges in clinical practice, challenging existing assumptions or perspectives with new ideas, and raising new questions. Participation also includes thoughtful listening and sharing challenges encountered when learning new material. We will go over our expectations for online class meetings during our first class.

Class Engagement & Participation - Evaluation Criteria	Possible Points
5 class meetings @ 70 points each	350
Total Possible Points	350

Individual Presentations: Research Article Evaluation (350 points)

Each student will present to the class on a research article in their area of interest. The presentation will be 10-15 minutes in length with 5-10 minutes for audience questions following the presentation. Guidelines for professional presentations that are consistent with national conference presentation expectations will be reviewed in class. Students will sign up during the first class meeting for a presentation during the 4th or 5th class meeting. You'll turn in your PPT in Blackboard and will present during class.

Individual Presentation - Evaluation Criteria	Possible Points
Introduction (clearly and concisely explains the topic/problem)	25
Identifies the research question or study purpose	25
Describes the conceptual or theoretical framework and research design	25
Describes the sample and sampling methodology	25
Describes the study variables	25
Describes the measures or instruments used in the study	25
Explains the approach to analysis and statistical technique	25
Summarizes findings, strengths, & limitations	25
Discusses implications for clinical practice	25
Identifies areas for future research	25
Power point slides are consistent with national conference guidelines	25
Responds to questions articulately and thoughtfully	25
Presents within the time limit	25
Communicates practical significance of research	25
Total Possible Points	350

Course Evaluation Summary:

Course Evaluation Summary	Possible Points
4 reflection/response to reading assignments @ 75 points each	300
Research Article Evaluation: 1 @ 350 points	350
Class Participation: 5 class meetings @ 70 points each	350
Total Possible Points	1000

Grading Scale:

A = 900 – 1000
B = 800 – 899
C = 700 – 799
D = 600 – 699
F = Below 600

NURS 6395: Tentative Schedule (may be updated during the semester)

Date	Topic	Read before class	Assignment due before class / Activities
January 14	<ul style="list-style-type: none"> • Welcome/Introductions • Syllabus Review • Sign-up for presentations • Why study statistics? • <i>The Joy of Stats: More than just a movie!</i> • Levels of Measurement • Variables (Independent/Dependent) • Charts, Histograms, and Scatter Plots • Introduction to instrument reliability and validity • What's your story? Descriptive statistics • Just say NO to bad science 		<i>Lecture</i> <i>Discussion</i> <i>Videos</i> <i>Article reviews</i>
February 11	<ul style="list-style-type: none"> • Normal Distribution • Sensitivity, Specificity • Sample size/sampling methods • Hypothesis testing • Statistical Power • Effect Size • Confidence intervals • What's in a p-value? • Clinical vs. Statistical Significance 	Heavey Ch. 3, 4, 5, 6, 7 Supplemental readings TBA	Reading reflection #1 <i>Lecture</i> <i>Discussion</i> <i>Videos</i> <i>Article reviews</i> <i>Practice Questions</i>
March 11	<ul style="list-style-type: none"> • <i>Correlation & Regression</i> • Comparing means • Asking the right questions: PICO • Reviews/Meta-analyses 	Heavey Ch. 9, 10, 11,12 Supplemental readings TBA	Reading reflection #2 <i>Presentations</i> <i>Lecture</i> <i>Discussion</i> <i>Videos</i> <i>Article reviews</i> <i>Guest scholar</i> <i>Practice Questions</i>
April 8	<ul style="list-style-type: none"> • Nonparametric approaches • Evaluating research design: types of validity, threats to validity, & evaluating research findings 	Heavey, Ch. 8, 13 Supplemental readings TBA	Reading reflection #3 <i>Lecture</i> <i>Discussion</i> <i>Article reviews</i>
April 29	<ul style="list-style-type: none"> • Presentations • Avoiding common errors in statistical analysis/interpretation • Course Evaluation 	Supplemental readings TBA	Reading reflection #4 <i>Presentations</i> <i>Lecture</i> <i>Discussion</i>

COVID-19 PRECAUTIONS – Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu so that the Dean of Students Office can provide you with support and help with communication with your professors. UTEP students may be tested for COVID-19 at the Student Health and Wellness Center located on the first floor of Union Building East. Click here for more information.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available on campus during the early part of the semester. For more information about the current rates, testing, and vaccinations, please visit epstrong.org