COLLEGE OF NURSING
UNIVERSITY OF THE PHILIPPINES MANILA

COURSE GUIDE

N-393: Advanced Statistics in Nursing
Second Semester, AY 2023-2024

Course Description:

Welcome to Advanced Statistics course. This is a major course for the Doctor of Philosophy in Nursing program aimed. The course reviews important concepts in statistics and presents their applications in nursing situations. This course equips you with the necessary skills and knowledge on data processing, data analysis, and data presentation. The focus is on advanced statistics that doctoral students would need in preparation for their dissertation.

The course is divided into three units, which covers (I) Review of Basic Statistics, (II) Common Inferential Statistical Methods, and (III) Multivariate Analysis. This is an online course. There will be no face-to-face study sessions. Teaching and learning will be in UPCN's learning management system – VLE and some synchronous sessions via Zoom. Follow the study schedule and module study guides closely. Participate in the online discussion forums and interact with your classmates to maximize learning.

Course Credit: 3 units – lecture

Course Outcomes:

By the end of the course, the students should be able to:

1. Explain the basic concepts and principles in statistics;
2. Demonstrate application of common inferential statistics used in Nursing;
3. Perform advanced statistical methods and analysis given a data set; and
4. Critique data analysis and interpretation of select statistical applications in Nursing studies.

Course Materials:

1. Course guide
2. Online resources/ references
3. Guidelines for assignments

Course Faculty:

Kathryn Lizbeth L. Siongco, PhD, RN
Assistant Professor 3
klsiongco@up.edu.ph

Course Platform:
UP Manila VLE

Course Schedule:
This course will utilize synchronous and asynchronous activities. Synchronous activities are scheduled on Tuesdays, 1:00 PM – 4:00 PM, Philippine Standard Time. Asynchronous Activities will be 4 hours/week based on the schedule.

Course Outline:
I. Review of Basic Statistics
    a. Basic statistical concepts
    b. Frequency tables and summary measures
    c. Probability and sampling
    d. Estimation
    e. Testing of hypothesis

II. Common Inferential Statistical Methods
    a. Test of independence
    b. Analysis of variance
    c. Correlation
    d. Regression

III. Multivariate Analysis
    a. Multivariate analysis of variance
    b. Multiple regression
    c. Logistic regression
    d. Factor analysis
    e. Path analysis
    f. Structural equation modeling

COLLEGE OF NURSING
UNIVERSITY OF THE PHILIPPINES MANILA

Study Schedule:

Week Date	Module Coverage	Learning Activities	Course Requirements
1 January 30			
2 February 6	Introductions Orientation to the course	Synchronous: Zoom ● Orientation to the course ● Leveling of expectations Course site: VLE ● Explore the course site ● Read the Course Guide Participate in the online forum for self-introduction	Attendance to Zoom Self-introduction in course site
3 February 13	I. Review of basic statistics a. Basic statistical concepts b. Frequency tables and summary measures c. Probability and sampling d. Estimation e. Hypothesis testing	● Read the resources ● Do the learning activities ● Participate in Discussion Forum 1 Submit Assignment 1	Discussion Forum 1 (due: Feb. 13) Assignment 1 – Critique of paper 20% (due: Feb. 20)
4 February 20	II. Common statistical methods a. Test of independence	● Read the resources ● Do the learning activities ● Participate in Discussion Forum 2	Discussion Forum 2 (due: Feb. 20)
5 February 27	b. Analysis of Variance	● Read the resources	Discussion Forum 3 (due: Feb. 27)

		- Do the learning activities - Participate in Discussion Forum 3	
6 March 5	c. Correlation	- Read the resources - Do the learning activities - Participate in Discussion Forum 4	Discussion Forum 4 (due: March 5)
7 March 12	d. Regression	- Read the resources - Do the learning activities - Participate in Discussion Forum 5 - Submit Assignment 2	Discussion Forum 5 (due: March 12) Assignment 2 – Secondary data analysis 20% (due: March 19)
8 March 19	III. Multivariate Analysis a. Multivariate Analysis of Variance	Synchronous: Zoom Course site: VLE - Read the resources - Do the learning activities - Participate in Discussion Forum 6	Attendance to Zoom Discussion Forum 6 (due: March 19)
9 March 26 Mid-sem	b. Multiple Regression	Synchronous: Zoom Course site: VLE - Read the resources - Do the learning activities	Attendance to Zoom Nov 3, 2022 6:00-9:00 PM Discussion Forum 7 (due: Nov 3)

		● Participate in Discussion Forum 7	
10 April 2	Reading break		
11 April 9	Holiday		
12 April 16	c. Logistic Regression	Synchronous: Zoom Course site: VLE ● Read the resources ● Do the learning activities ● Participate in Discussion Forum 8	Attendance to Zoom Discussion Forum 8 (due: April 16)
13 April 23	d. Factor Analysis	Synchronous: Zoom Course site: VLE ● Read the resources ● Do the learning activities ● Participate in Discussion Forum 9	Attendance to Zoom Discussion Forum 9 (due: April 23)
14 April 30	e. Path Analysis	Synchronous: Zoom Course site: VLE ● Read the resources ● Do the learning activities	Attendance to Zoom Discussion Forum 10 (due: April 30)

		● Participate in Discussion Forum 10	
15 May 7	f. Structural Equation Modeling	Synchronous: Zoom Course site: VLE ● Read the resources ● Do the learning activities ● Participate in Discussion Forum 11	Attendance to Zoom Discussion Forum 11 (due: May 7) Assignment 3 – Research proposal with data analysis plan 20% (due: May 14)
16 May 14	Final examination	● Take the final exam via course site ● Evaluate the course	Attendance to Zoom during the exam 1:00 PM – 3:00 PM (2 hours) Course evaluation
16 May 21	Removal examination		Attendance to Zoom during the exam 1:00 PM – 3:00 PM (2 hours) Course evaluation

Requirements:

The minimum passing level for the course is 60. There will be several online discussion forums in the VLE course site, three assignments, and a final exam.

Evaluation Criteria:
Discussion Forums   20%
Assignment 1

(Critique of Paper)	20%
Assignment 2	
(Secondary Data Analysis)	20%
Assignment 3	
(Research Proposal with Data Analysis Plan)	20%
Final Exam	20%

Learning Contract

This covers the VLE embedded Acceptable Use Policy and Academic Integrity and Learners' contract. Please accomplish them.

The Assignments

Detailed guidelines for each of the assignments, together with the evaluation criteria will be uploaded in VLE. Please refer to the Assignment Guide for the coverage of the assignments and dates of submission.

The Online Discussion Forums

These online discussions are asynchronous, which means you can join the discussions anytime within the time period allotted for each forum. The topics for each discussion forum will be opened in due time. In the forum, you are expected to demonstrate a basic understanding of the contents. Cite references as appropriate. It is hoped that a deeper level of understanding of the concepts and relevant issues will be developed through sharing of ideas, experience, reflections, analysis, applications and syntheses. Limit your post to 500 words each time.

Final Exam

This is an integration of the concepts learned in the course and will be administered through the VLE. The minimum passing grade for the final exam is 60. Eligibility to take the removal exam is a grade lower than 60 in the final exam. The minimum passing grade for the removal exam is 70%.

House Rules

1. All course discussions are to be conducted online at the course site. Monitor the course site at least once a week for any announcements.
2. Remember that all class discussions are academic discussions. Personal messages should be sent directly to the email addresses of persons concerned.
3. Observe network etiquette when posting in discussion boards. Read http://www.albion.com/netiquette/corerules.html

4. Make sure that your contributions to discussion forums are relevant to the topics. Respond to discussion questions and to your classmates clearly and concisely.
5. Submission of assignments should be on time. Send an electronic file (upload) to thecourse site. Late assignments will only be accepted if there is a valid excuse. Otherwise timely feedback might not be possible.
6. For students who will not able to complete all requirements on time, you can either be given a grade of INC (incomplete). If you are given a grade of INC, you have one year to complete the course.
7. Observe intellectual honesty at all times. Plagiarism and cheating are unacceptable and will not be tolerated.