JOHNS HOPKINS
SCHOOL of NURSING

COURSE NUMBER AND TITLE: NR.110.202 Biostatistics

CREDITS: 3 Credits

ALLOCATION OF CREDITS: 3 Credits

PRE- AND COREQUISITES: None

COURSE DESCRIPTION:

This course provides an introduction to the basic concepts of statistical ideas and methods that aims to equip students to carry out common statistical procedures and to follow statistical reasoning in their fields of study. Principles of measurement, data summarization, and univariate and bivariate statistics are examined. Emphasis is placed on the application of fundamental concepts to real world situations.

OBJECTIVES:

Upon completion of the course, the student should be able to:

1. Summarize and interpret data visually through appropriate statistical graphs.
2. Describe density curves and the properties of the normal distributions.
3. Examine correlations and linear relationships of explanatory and response variables.
4. Describe sampling distributions and the central limit theorem.
5. Discuss statistical inference using confidence intervals and tests of significance.
6. Explain the differences among various statistical techniques and identify an appropriate technique for a given set of variables and research questions.

HOW WE WILL WORK TOGETHER:

Students will use their personal computer, calculator, text, and the course site on Blackboard. This course will assess your knowledge of the materials using online lectures, discussions, assignments, quizzes and examinations.

TECHNICAL SUPPORT:

For issues related to Blackboard login and access, contact SON Help Desk at 410-614-8800 or email son-helpdesk@jhu.edu

For any other issues with course materials, you will find detailed contact information for the instructor, the teaching assistant and others under Contact Information section of the Blackboard site. You can also post a thread under the General Discussion Forum. We will get back to you as soon as we can.

SUMMARY OF OPPORTUNITIES TO DEMONSTRATE LEARNING:

The following activities will be evaluated in this course. Corresponding point values and weights are provided. Specific details regarding assignments are provided in the course schedule and on the Blackboard course site.

OPPORTUNITIES TO DEMONSTRATE LEARNING	COURSE OBJECTIVES ADDRESSED	VALUE
Module Quizzes (10 quizzes in total, 10 points per quiz)	1, 2, 3, 4, 5, 6	100pts (50%)
Discussion Forums (5 discussion boards in total, 10 points per discussion board)	1, 2, 3, 4, 5, 6	50pts (20%)
Examination 1	1, 2, 3, 4, 5, 6	100pts (15%)
Examination 2	1, 2, 3, 4, 5, 6	100pts (15%)
TOTAL		350 pts (100%)

OPPORTUNITIES TO DEMONSTRATE LEARNING:

- *Lectures and Readings*: Most modules will include recommended reading from the required text and associated lectures. It is recommended that students read the material and listen to the lectures as to best facilitate their successful completion of course assignments.

- *Blackboard Posts*: Students are required to contribute to weekly discussion board topics. Post a thoughtful and complete response and reply to at least two classmates' posts by the assigned deadline to receive full credit. Suggest length is 1-2 paragraphs. High quality posts will contribute substantive content, illustrate a strong understanding of course material, reflect professionalism, and be free of grammatical errors. Please cite sources using APA guidelines and include links as appropriate.

- *Quizzes:* Regular quizzes will test student understanding of course content. Quizzes can be attempted one time and students are encouraged to consult course materials as needed to complete the quiz. These quizzes are not timed tests, but please understand that if you walk away from your quiz while taking it, depending on your computer and the length of time, you may be automatically logged out of Blackboard.

- *Exams*: Comprehensive exams consisting of multiple choice questions will be given to assess student understanding of course content. They are open book, open notes and timed. Only one attempt is allowed for each exam. There are no makeup exams.

LATE ASSIGNMENT POLICY:

All course assignments listed in the syllabus must be turned in by the specified due date and time. Once the due date and time have passed, 10% of the total points you have earned on the assignment will be deducted per day (per 24 hour period). There are no makeup or extra credit assignments allowed. Please contact the course instructor prior to the due date in the case of extenuating circumstances.

GRADING SCALE:

RANGE	LETTER GRADE	GRADE POINT
97 – 100	A+	4.0
93 – 96	A	4.0
90 – 92	A-	3.7
87 – 89	B+	3.3
83 – 86	B	3.0
80 – 82	B-	2.7
77 – 79	C+	2.3
73 – 76	C	2.0
70 – 72	C-	1.7
67 – 69	D+	1.3
63 – 66	D	1.0
60 – 62	D-	0.7
<60	F	0

REQUIRED TEXTBOOKS AND OTHER COURSE MATERIALS:

Moore, D., Notz, W., & Fligner, M. (2013). Essential Statistics. (2nd ed.). New York, NY: W.H. Freeman and Company.

ACADEMIC POLICIES

For a full list of academic policies, please see the current academic catalog and handbook at http://nursing.jhu.edu/catalog.

HONOR CODE

Students enrolled in the Johns Hopkins University School of Nursing are expected to conduct themselves in a manner that upholds the values of this institution of higher education. Each student is obligated to refrain from violating academic ethics and maintaining high standards of conduct. In addition, the School of Nursing upholds the professional code of ethics established in the Code of Ethics for Nurses (ANA, 2015). Each student is held accountable for adhering to the American Nurses Association Code of Ethics. For the full Johns Hopkins School of Nursing Honor code, please go to http://nursing.jhu.edu/catalog.

COMMUNICATION POLICY

Students may communicate with the instructor by email, which is provided in the Contact Information area. The instructor will respond to students within 48 hours. Assignment feedback will be provided to students within two weeks of submission.

All official communication, notices, & announcements will be distributed through student JHU-SON e-mail accounts via blackboard. The student is accountable for checking this account regularly and for all course communication sent to it.

Students are responsible for reading "Netiquette" which is located under Syllabus & Course Info on the Blackboard site. Netiquette provides simple guidelines for civil on-line discourse & behavior, that participants are to follow and expect of one another.

DISABILITY SERVICES

If you have a disability and may require accommodation in this course, please contact the *Office of Student Affairs* at (410) 955-7545 or SON-StudentAffairs@jhu.edu to discuss your specific needs.

TOPICAL OUTLINE:

Learning activities and assignments will be explained in detail within each learning module under Course Content in Blackboard. Unless otherwise noted, all assignments are due on the due date listed in the schedule at 5:00 PM EST/EDT. Permission for late submission of assignments must be requested from instructor before the due date, and may only be granted under special circumstances.

Module/ Week Dates	**Topic**	**Required Reading: Essential Statistics**	**Assignment**
Prior to start of term	Getting Started & Course Introduction		Familiarize yourself with Blackboard
Module 1	Introduction to Statistics Picturing Data with Graphs	Chapter 1	Module 1 Quiz Module 1 Discussion Board: Introduce
Module 2	Describing Distributions with Numbers	Chapter 2	Module 2 Quiz Module 2 Discussion Board
Module 3	The Normal Distribution	Chapter 3	Module 3 Quiz Module 3 Discussion Board
Module 4	Correlation and Simple Linear Regression	Chapters 4 & 5	Module 4 Quiz
Module 5	Sampling Distributions	Chapter 11	Module 5 Quiz
Exam	Modules 1-5		Exam 1
Module 6	Confidence Intervals	Chapter 14	Module 6 Quiz Module 6 Discussion Board
Module 7	Tests of Significance	Chapter 15	Module 7 Quiz
Module 8	*t* Tests	Chapters 18 & 19	Module 8 Quiz Module 8 Discussion Board
Module 9	ANOVA	Chapter 25	Module 9 Quiz

Module 10	The Chi-square Test	Chapter 23	Module 10 Quiz
Exam	Modules 6-10		Exam 2