Loyola University at Chicago
School of Social Work

Introduction to Social Statistics – Online Course

Instructor: Terri Kilbane, Ph.D.
Email: tkilban@luc.edu
Office #: 312/915-7026

Text


Note: Feel free to search on the internet to purchase the earlier editions to save money. Another way to save money is to search for the e-book version. This version is usually about half of the cost and the material is available through the internet. Lastly, at times you will be notified if there are any students who want to sell their books.

Instructional Description

The purpose of this course is to familiarize students with the basic concepts of descriptive and inferential statistics. This course is designed to meet the requirements of incoming masters level social work students. Therefore, it is expected that students will have little or no background in statistical methods with the exception of students who have taken statistics but not within the required period of time. Students will be exposed to elementary data analysis techniques which use statistics in order to interpret findings reported in the social work research literature.

Course Objectives

1. To familiarize students with the role of social statistics in social work research.

2. To familiarize students with the basic concepts of statistics.

Educational Outcomes

It is expected that at the completion of the course students will be able to:

1. Identify statistical procedures used in research reports.

2. Interpret elementary statistics used in reporting of social work research.

3. Evaluate the appropriateness of statistical methods used by researchers.
Teaching Methodology

To achieve the stated objectives, the course will consist of: 1) power points; 2) power points with taped lecture; 3) readings from required text; 4) quizzes; and 5) final exam.

It is also a main objective of the instructor to reduce anxiety around the issue of statistics and allow students to view them as a tool to evaluate their work with clients. It is hoped that students will be taught how to be resourceful so when the time comes to apply these statistical tools they will have the ability to refresh their skills and know where to locate the material they need. Therefore, the quizzes and final are open book and notes.

Assignments and Grading Criteria

Students will be graded on 7 quizzes and one final exam. A quiz is taken after each session to monitor the student’s understanding of the content and to aid in the reinforcement of the lecture content. The final exam will cover the entire course material presented on the power points. The quizzes and final exam will be open-book tests. However, students are cautioned that the tests are to be completed within the time limits. Quizzes must be taken within a one hour limit which should be more than sufficient for 10 questions. In addition, quizzes must be passed before the next one can be taken. Multiple retakes of the quizzes are allowed. Students may also use their notes and a calculator if needed. Work must be done independently.

Criteria for Evaluation

This course is a non-credit course and will be graded on a pass-fail basis. This course will NOT appear on your transcript. Each quiz and the final exam must be passed with a 70%. Students are allowed to retake the quiz if a passing grade is not achieved. No retakes are allowed on the final. It is suggested that students use quiz results as feedback (as well as the power points) to use as a study tool for the final exam. The final must be taken in person at the School of Social Work from 9 a.m. to 5 p.m. Monday through Friday as scheduled with staff. Please contact instructor for extenuating circumstances. At the Carthage campus the final can be taken on Saturdays. Accommodations have been made for the Online Bilingual MSW Program. Please contact the instructor to identity yourself as a student in the online program.

Student Responsibilities

Students are expected to complete the online course within the given time frame. The online course offers the student the flexibility to work at their own pace and schedule. Sometimes this is good (student as a self-starter), sometimes this is bad (student is a procrastinator). The point is that the course needs to be completed within the given time frame; however you choose how to do that is up to you. As a word of caution, I would not suggest you wait until the last minute to complete all the quizzes and final.

Students Needing Accommodations for Disabilities
Students needing accommodations for any type of disability should make an appointment with the instructor to discuss the matter. However, I do believe the flexibility of the course should make the course more accommodating to your needs.
Course Outline

SESSION 1: Introduction

This session will introduce the course to the students. An overview of the importance of research and statistics in social work will be discussed. This session reviews a number of common terms used in social work research. Level of measurement will be introduced.

READING ASSIGNMENT: Chapter 1

QUIZ # 1: Chapter 1

SESSION 2: Tables and Graphs/Measures of Central Tendency and Variability

This session will cover how to construct ungrouped and grouped frequency distributions, percentage distributions, bar graphs, histograms, and pie charts. Emphasis will be given to the types of data that are best suited to the various types of presentations. This session will also cover the measures of central tendency (mean, median, mode) and variability (range, standard deviation). Students will be presented with the concepts and provided with illustrations of how to calculate them and interpret their meaning and use.

READING ASSIGNMENT: Chapters 2 & 3

QUIZ # 2: Chapter 2 & 3

SESSION 3: Normal Distribution

This session will cover the properties of the normal distribution, the importance of normality for inferential statistics, the use and calculation of z scores, and how they are used in standardized tests.

READING ASSIGNMENT: Chapter 4

QUIZ # 3: Chapter 4

SESSION 4: Hypothesis Testing and Statistical Tests

The introduction of hypothesis testing will review the development of hypotheses, the theory behind demonstrating a relationship between two variables, and the meaning of statistical significance. We will also address the importance and considerations that have to be made in selecting an appropriate statistical test.

READING ASSIGNMENT: Chapters 5 & 7

(IF YOU HAVE THE 8TH OR 9TH EDITION THIS MATERIAL IS IN CHAPTER 5 AND IN CHAPTER 6, SELECTING A STATISTICAL TEST AND PARAMETRIC AND NON-
SESSION 5: Crosstabulation and Chi Square

This session will introduce the analysis of nominal level data. The logic of crosstabulation and how it is used to determine the relationship between two variables will be presented. This session will also demonstrate how to calculate the chi square statistic and interpret the results.

READING ASSIGNMENT: Chapter 10

(IF YOU HAVE THE 8TH OR 9TH EDITION, THIS MATERIAL IS NOW FOUND IN CHAPTER 8.)

QUIZ # 5: Chapter 10

SESSION 6: Correlation

This session will cover the logic of correlation and the relationship between two interval/ratio level variables. The Pearson’s r will be presented and students will learn how to interpret this statistic (strength and direction).

Reading Assignment: Chapter 8

(IF YOU HAVE THE 8TH OR 9TH EDITION, THIS MATERIAL IS NOW FOUND IN CHAPTER 9.)

QUIZ # 6: Chapter 8

SESSION 7: t Tests and ANOVA

This session will cover an overview of the use and appropriateness of the t test and ANOVA to analyze differences between groups. An understanding of the principles that underlie these tests and how they can be used in hypothesis testing will be covered.

READING ASSIGNMENT: Chapter 11

(IF YOU HAVE THE 8TH OR 9TH EDITION, THIS MATERIAL CAN NOW BE FOUND IN CHAPTER 7.)

Quiz # 7: Chapter 11

SESSION 8: Final Exam (to be taken on-site at the School of Social Work, WTC or Carthage campus. Accommodations are made for Bilingual Online MSW Program).