L A K E H E A D U N I V E R S I T Y
DEPARTMENT OF SOCIOLOGY

Sociology 3311 WA
Research Techniques & Data Analysis
Dr. Jianye Liu

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Office Hours: *Tuesday & Thursday,* **12:00-1:00 p.m. or by appointment**
Classes: **AT-3001,** *Tuesday & Thursday***, 10:00-11:30AM**

Texts:

Healey, J.F. & Steven G. Prus. 2016. Statistics: A Tool for Social Research, 3rd Canadian Edition. Toronto, ON: Nelson Education Ltd.

Course Description:

Sociology 3311 WA is the second part of the previous sociology 3309 YA (a full year course) designed to provide students with a preliminary understanding of the skills and knowledge required to carry out quantitative data analysis. It includes the organization and presentation of data, measures of central tendency, measures of variability, percentiles and z-scores, the normal distribution, random sampling distributions, probability, and statistical inference. Computer techniques are limited to the creation of data files and statistical analysis using SPSS.

Students are expected to understand simple mathematical procedures and to own a calculator that has the capacity to perform square roots. Calculators and textbooks should be brought to all statistics classes.

Courses requirements:

Class participation
Participation includes asking questions, answering questions, discussing links to other things, and thinking about implications. It is important to come to class with some notes and reflections on the material. For each class, the instructor will take notes of the quality and quantity of participation of each student, and the extent to which this participation is based on the text having read in advance. The class participation accounts 10% of the final grade.

Assignments
An emphasis will be on the application of the many concepts and techniques covered in class and through the required readings in the textbooks. Through a series of 3 assignments accounting for 10% each of the final grade, students will have an opportunity to apply what they have learned and subsequently obtain some feedback. Each assignment will be marked and returned, some will be discussed in class, and students can always meet with the instructor to discuss possible difficulties or concerns.

Short tests
There will be 2 short tests throughout the term. They will contain multiple choice and possibly short answer questions. These tests will be held in the regular classroom during class. The material covered between tests will be the major focus of each test, although the exact details will be specified clearly in class well before each test. THE TWO TESTS WILL BE WORTH 30% OF YOUR FINAL GRADE.

Final Examination
The final examination will be scheduled during the final exam period. It will be 3 hours in length and may have multiple choice, short answer problems and major problems. Students are responsible for the entire statistics portion of the course for the final examination. The final exam accounts for 30% of the final grade.

Distribution of Grades

Class participation	10%
2 tests	30%
3 assignments	30%
Final exam	30%

Outline and schedule (the following schedule may be modified slightly throughout the term)

January 5	Introduction and Basic Math Operation
January 7 & 12	Healey Chapter 1 & 2 Introduction and Basic Descriptive Statistics
January 14 & 19	Healey Chapter 3 Measures of Central Tendency
	Assignment #1 (Due Feb. 4)
January 21 & 26	Healey Chapter 4 Measures of Dispersion
	Homework Questions 1
January 28	Healey Chapter 5 The Normal Curve
February 2	Healey Chapter 6 Inferential Statistics
	Homework Questions 2
February 4	Healey Chapter 7 Inferential Statistics (continued)
February 9	Test # 1
February 11	Healey Chapter 8 Hypothesis Testing
	Assignment #2 (Due March 1)
February 15-19	Study break
February 23	Healey Chapter 8 (continued)
February 24	Healey Chapter 9 Hypothesis Testing
	Homework Questions 3
March 1	Healey Chapter 10 Hypothesis Testing
	Homework Questions 4
March 3	Healey Chapter 10 Hypothesis Testing (continued)
March 8	Healey Chapter 11 Hypothesis Testing
March 10	Healey Chapter 12, 13 Nominal Measures of Association
	Homework Questions 5
March 15	Test # 2
March 17 & 22	Healey Chapter 14 Ordinal Measures of Association
	Assignment #3 (Due April 5)
March 24 & 29	Healey Chapter 15 Interval Ratio Measures
	Homework Questions 6
March 31	REVIEW

NB. The dates for class coverage of topics are only best approximations.