

**LAKEHEAD UNIVERSITY (Orillia Campus)**  
**Department of Interdisciplinary Studies and the Department of Sociology**  
**Sociology 3311 WAO**

**Research Techniques & Data Analysis**

**Facilitator: Dr. Kevin Willison Office: 3<sup>rd</sup> Floor (500 University Av.)**

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URL: [https://www.researchgate.net/profile/Kevin\\_Willison/](https://www.researchgate.net/profile/Kevin_Willison/)

**Office Hours: by advanced appointment Monday to Friday (via e-mail)**

**Classes: OA 1002 [first floor computer lab], Monday & Wednesday, 1:00-2:30 PM**

**Required Text:**

Roberts, L.W., Edgerton, J., Peter, T., Wilkinson, L. (2015). Understanding Social Statistics. Oxford University Press. ISBN 978-0-19-544429-2 (pbk.)

- Available at the LU Orillia campus book store.

**Course Description:**

Sociology 3311 WAO is 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, levels of measurement, measures of central tendency, measures of variability, percentiles and z-scores, the normal distribution, random sampling distributions, parametric and non-parametric statistical procedures, probability, and statistical inference / correlation. Computer techniques covered will be limited to basic statistical analysis using SPSS (Statistical Package the Social Sciences) software.

SPSS requires an operating licence and therefore is *not* available on all campus computers.

- Please refrain from wearing perfume as the lab is an enclosed area. Some people (like your instructor) may be sensitive to the smell.
- Please refrain as well from eating in the lab as this may get crumbs and stains on the keyboard(s).
- During class time please do not use your cell phone.

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.

**Key Learning Objectives:**

- [i] How to decide which statistical procedures are suitable for which purpose.
- [ii] Be able to analyze / calculate “simple” solutions using a calculator plus use of SPSS.
- [iii] How to interpret results.

**Courses requirements:**

**Class Participation**

Participation includes: completion of assigned homework questions; 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 found in your textbook. Through three SPSS 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 two 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 valued at 30 percent of your final grade.

### **Final Examination**

The final examination will be scheduled by the university Registrar. It will be 3 hours in length and may have multiple choice, short and long answer 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% (see posted grading rubric in D2L).
- 2 tests at  $2 \times 15 = 30\%$
- 3 SPSS-related assignments at  $3 \times 10 = 30\%$
- Final exam = 30%

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

January 4 Introduction and Basic Math Operations [BEDMAS]

January 6 & 11 Text Chapters 2 and 3 – The Logic of Social Statistics / Calculations and Computers (skip chapter one)

January 13 & 18 Text Chapter 4 – Univariate Analysis

- SPSS Assignment #1 (Due Jan 27)

January 20 & 25 Text Chapter 5 - Measures of Central Tendency

- Homework Questions 1

January 27 Text Chapter 6 – Measures of Dispersion

February 3 Text Chapter 7 Charts and Graphs

- Homework Questions 2

February 8 Text Chapter 8 The Normal Curve

- February 10 Test # 1

February 15 Text Chapter 8 (continued)

- SPSS Assignment #2 (Due March 2)

*February 15-19 Study break*

February 22 Text Chapter 9 – Understanding Relationships

February 24 Text Chapter 10 – Bivariate Tables

- Homework Questions 3

February 29 Text Chapter 11 – Scatterplot Analysis

- Homework Questions 4

March 2 Text Chapter 13 (skip chapter 12) – Statistics for Categorical Relationships

March 4 Text Chapter 13 -Statistics for Categorical Relationships (continued)

March 9 Text Chapter 14 – Statistics for Continuous Connections

- Homework Questions 5

March 11 Test # 2

March 16 & 18 Text Chapter 14 - Statistics for Continuous Connections (continued)

- SPSS Assignment #3 (Due March 25)

March 23 & 25 Text Chapter 15 Multivariate Analysis – Part 1

- Homework Questions 6

March 30 Text Chapter 15 Multivariate Analysis – Part 2

April 1 REVIEW

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

### **Emergency? Know the Number to Call**

Lakehead Security reminds everyone to **call 3911** (Orillia) if you require emergency service para-medics, firefighters and police officers do not always know where to find certain buildings or locations on our campuses. By calling 3911 (Orillia), Lakehead Security will quickly dispatch a security guard to your location and contact 911 services. Lakehead Security will then meet and escort emergency services to your location to save valuable time.

### **Regarding E-mail and Accessing “Desire2Learn”**

Should IT related problems arise please contact “Help Desk” at **ext. 7777** (on campus) – or tel. 705-330-4008 (then the extension). Help Desk will assist you with your specific IT issues / concerns.

NOTE: All e-mail communication sent from students to the instructor for this class must originate from the student’s own Lakehead University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student’s responsibility to ensure that communication is sent to the university from a Lakehead account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.

### **General E-mail Guidelines:**

[1] Within all e-mail correspondence (not just for this course) it is advisable to follow “the ten commandments of e-mail netiquette.” See <http://www.studygs.net/netiquette.htm>

[2] Please use your Lakehead University e-mail account (as other e-mail accounts may be treated as spam).

[3] Please be sure to identify yourself in your e-mail (not only your name but also what course you are in, as your Instructor teaches more than one course).

[4] The course instructor may be reached at: [kdwillis@lakeheadu.ca](mailto:kdwillis@lakeheadu.ca). I will do my best to respond to your e-mail within 12 hours of receipt. Please do not expect an immediate response as I only check my e-mails once or twice daily (due to my teaching and research activities).

[5] Please be advised that you will likely *not* get a response e-mailing the Instructor the night /day before a test or exam. Please plan ahead.

[6] Your grades/marks will not be discussed over the internet / e-mail. Please talk to me in person on such matters.

[7] Please refrain from sending e-mails / texting during class time. Not only is it best to focus on the course material during class, texting may also bother others around you.

**For Students with Disabilities:** Lakehead University offers appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please discuss this with me in person within the first 2-3 weeks of classes. Note: Kevin Willison has specialized AODA training to assist you.

**Missed Tests and/or Exams:**

Make-up tests or examinations will only be given with written documentation from a healthcare practitioner using the official Student Health Certificate, available at: <http://registrar.lakeheadu.ca/uploads/docs/F.HealthCertificate.pdf> .

**Religious Observance Policy:** If you require religious accommodation(s), you must make your request to the instructor preferably within the first two weeks of class.

**Special Needs:** Dr. Willison has received specialized training in AODA (the Accessibility for Ontarians with Disabilities Training Act). As there may be a need to provide information in accessible formats to persons with disabilities, students with special needs who require accommodations should speak with their Instructor privately at the very start of the course. Appropriate documentation must be provided to Student Services. If needed, refer to <http://policies.lakeheadu.ca/> for further information.

**Course Concerns?** Students are asked to speak with their Instructor should there be a problem or concern regarding the course which you feel needs to be raised.

**The University Calendar:** <http://mycoursecalendar.lakeheadu.ca/>

- University Regulations, program & course information, academic session dates etc.

**Lakehead University Policies:** <http://policies.lakeheadu.ca/>

- student code of conduct, test and examination policies, grades, and much more

**Weather Issues:** Refer to the Lakehead University (Orillia) home page website to check for class cancellations. See: <http://www.lakeheadu.ca/>