

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

**Sociology 3311 WAO (2019)**

**Research Techniques & Data Analysis**

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

Email: [kdwillis@lakeheadu.ca](mailto:kdwillis@lakeheadu.ca)

**Office Hours:** by advanced appointment only please → Tuesday to Friday (via e-mail)

**CLASS Location:** OA 1022 [first floor computer lab, Simcoe Hall, near Learning

Commons] **Class Time(s):** **Monday & Wednesday: 5:30-6:50 PM**

**Required Text:**

J. Healey, S. Prus, R. Lieflander : **Statistics – A Tool For Social Research**. Fourth Edition.  
Nelson Publishers. ISBN: 978-0-17-672508-2 (pbk.) 2018.

- Available at the LU Orillia campus book store.

**Course Description:**

Sociology 3311 WAO is designed to provide students with an introduction towards understanding the skills and knowledge required to carry out basic quantitative data analysis. It includes such topics as 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 and correlation. Computer techniques covered will be limited to conducting statistical analysis using SPSS (the Statistical Package of the Social Sciences) software.

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

- Please refrain from wearing perfume or smoking prior to the lab as such is an enclosed area. Some people are highly sensitive to the smell.
- Do not eat nor drink in the lab as this may get crumbs and stains on the keyboard(s).
- During class and/or lab time please refrain from using your cell phone.

Students are expected to understand simple mathematical procedures and to use / own a calculator that has the capacity to perform square roots. Avoid using a complex / scientific calculator. A calculator, writing materials and your required textbook should be brought to all classes.

**Key Learning Objectives:**

By the end of the course, students will be expected to know:

- [i] How to decide which statistical procedures is most suitable, and for which purpose.

[ii] Be able to analyze / calculate simple statistical solutions using both a calculator as well as SPSS.

[iii] How to graph, display and interpret statistical results.

### **Courses requirements:**

#### **Class Participation**

This course is cumulative therefore regular attendance is highly recommended. Your active participation is also highly recommended. This includes: completion of assigned homework questions; asking questions, answering questions, and thinking about / reflecting upon what your data is conveying. It is important to come to class prepared. For every one hour of lecture time it is recommended that you take one hour reviewing material on your own.

#### **SPSS 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 a total of 30% of your final grade, students will have an opportunity to apply what you have learned concerning statistics.

#### **Tests**

There will be three tests throughout the term. They will contain a combination of multiple choice plus short answer questions. These tests will be held in class. Note: the course is NOT the textbook, meaning, testable material for this course comes from three different sources: (i) required text readings; (ii) material as posted in D2L and, (iii) lecture data (on SPSS procedures for example). The three tests have a combined value of 45 percent of your final grade. All tests will require the use of a calculator.

#### **Final Exam**

The final exam will be scheduled by the university Registrar. It will be 3 hours in length and will have multiple choice, short and long answer problems. Students will be required to remember such information as statistical formulas and their application. The final exam requires the use of a calculator and, accounts for 25% of the final grade.

#### **Distribution of Grades / Course Evaluation Summary**

- 3 tests at  $3 \times 15 = 45\%$  → Scheduled: Jan 30, Feb 27, and March 27
- 3 SPSS (lab) assignments at  $3 \times 10 = 30\%$  → DUE: Feb. 4, March 4, March 25
- Final exam = 25%

#### **Sample Topics to Be Covered in this Course:**

- Introduction and Basic Math Operations [BEDMAS]
- Use of SPSS
- The Logic of Social Statistics / Calculations and Computers
- Univariate Analysis
- Bivariate Analysis
- Measures of Central Tendency
- Measures of Dispersion
- Charting and Graphing Statistical Results

- ➔ The Normal Curve (use of parametric statistics).
- ➔ Non-Normal (skewed) curves (use of non-parametric statistics)
- ➔ Understanding Relationships
- ➔ Scatterplot Analysis
- ➔ Multivariate Analysis – Part 1
- ➔ Multivariate Analysis – Part 2

**TERM - Important Dates: WINTER TERM**

- **Note: As dates may change. please check yourself on the LU website.**

<b>Term TWO at LU - Start Date</b>	<b>Monday January 7, 2019</b>
<b>Term TWO – Break</b>	<b>No classes during: Feb. 18-22, 2019</b>
<b>Winter Term – Final Class at LU</b>	<b>Friday April 5, 2019</b>

**Accommodations / Special Needs:**

Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all academic activities. If you think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) first. Register as early as possible. For more information, please visit: <http://studentaccessibility.lakeheadu.ca>

Your instructor - Dr. Kevin Willison - has received (on-going) specialized training in AODA (the Accessibility for Ontarians with Disabilities Training Act).

**Emergency? Know the Number to Call**

**In case of emergency Security can be reached through any phone on campus, through emergency intercoms in Simcoe Hall and, also in the parking lot. Their direct extension is 2009.**

Paramedics, firefighters and police officers do not always know where to find certain buildings or locations on our campuses. By calling ext. 2009 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.

[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.

**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> .

- Note: Missed tests or SPSS assignments without proper documentation for an extension will receive a grade of zero.
- Note: There are no “bonus” or “make-up” assignments (to help boost marks) for this course.

**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.

**Course Concerns?** Students are encouraged to first speak with their course Instructor should there be a problem or concern. If not resolved by the course instructor feel free to speak with their respective Departmental Chair.

**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:** Use your own discretion regarding safety. Refer also to the Lakehead University (Orillia) home page website to check for class cancellations.

See: <http://www.lakeheadu.ca/>