Course Description: The course will provide an introduction to statistical concepts and techniques used in social science research. It is designed to provide you insights about how quantitative data is collected and how these data are then analyzed for information. This is an applied course where the focus will be on (1) the application of statistical techniques to answer empirical questions and (2) the interpretation of quantitative evidence. The course will begin with the basic concepts of statistical theory and methodology and end in explaining multivariate regression and logistic regression.

During class, I will provide you with an introduction to the underlying statistical theory behind each statistical method and provide you with several examples about how to apply each statistical technique.

Learning outcomes:
• Learn how data used in quantitative data analysis is collected
• Develop an understanding of different statistical tools used for quantitative data analysis
• Thoughtfully evaluate published research using quantitative data analysis
• Acquire basic skills necessary to conduct empirical analysis using quantitative analysis

Prerequisites: Sociology 2205A/B and 2206A/B or the former 231 (or equivalent) and enrollment in fourth year of an Honors Specialization or Honors Double Major in Social Science. 60% in Sociology 2205A/B and 2206A/B or the former 231. If not in an Honors Specialization, a minimum grade of 70% in Sociology 2205A/B and 2206A/B or the former 231 or written permission from Department.

There is some math and mathematical concepts in the course readings but no particular math skills are required. I will introduce notation, concepts and methodology gently and on a basis that enables the students to understand what is going on. But the course is by no means a course in mathematical statistics.

Texts: There is one required texts for the course and several recommended books.

Required:

**Recommended:**

**Introduction to math for social sciences:**

**Using SPSS for Social Statistics:**

**Using STATA for Social Statistics:**

**Using R for Social Statistics:**

**Method of Evaluation:** The final grade is computed using the following weights:

1) Three problem sets (50 percent). During class you will be given three problem sets to analyse and report (a couple of pages for each set).
2) Research report at the end of class (50 percent). You can either choose to work with a data set of your own, perhaps as part for your MA/PhD project or I can provide you with a data set for the research report. You are supposed to analyse the data and write a short research paper on your results. The paper is supposed to be outlined like a real research paper with an introduction that frames the analysis, a small theoretical section, description of the data and the method, a section on results and a conclusion.

Course Schedule and Readings:

Week 1 (8th Jan.)
- Introduction to the course

Week 2 (15th Jan.)
- Statistical methodology (AF, Chapter 1 and 2)

Week 3 (22nd Jan.)
- Descriptive statistics (AF, Chapter 3)

Week 4 (29th Jan.)
- Probability distributions (AF, Chapter - 4)
- First problem set due

Week 5 (5th Feb.)
- Statistical Inference (AF, Chapter 5 and 6)

Week 6 (12th Feb.)
- Categorical data analysis (AF, Chapter 7)

Week 7 (19th Feb.)
- Spring Reading week – no class.

Week 8 (26th Feb.)
- Linear regression and correlation (AF, Chapter - 9)
- Second problem set due

Week 9 (4th Mar.)
- Introduction to Multivariate relationships (AF- Chapter 10)

Week 10 (11th Mar.)
- Multiple Regression and Correlation (AF - Chapter 11)

Week 11 (18th Mar.)
- Model Building with Multiple Regression (Chapter 14)
- Third problem set due

Week 12 (25th Mar.)
- Logistic Regression Models (AF - Chapter 15)
Week 13 (1st Apr.)
- Wrap up and discussion of writing the research paper

Important Policies:

A Note on Plagiarism:
Students must write their assignments in their own words. Whenever students take an idea from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major scholastic offence. See Scholastic Offences (below) for the link to Scholastic Discipline regulations.

Plagiarism Checking:
All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

Scholastic Offences
Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following web site: http://www.uwo.ca/univsec/appeals_discipline/index.html

Accommodation
Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.
Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are encouraged to register with Student Accessibility Services, a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both SAS and their graduate programs (normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.
For more information, see http://www.sdc.uwo.ca/ssd/

Completion of Course Requirements
Course requirements must be completed by the end of the term in which the course is offered (Fall-December 31; Winter-April 30, Summer-August 31). Only in exceptional circumstances may a student take additional time to complete the course requirements. In such a case, the student must first meet with the Graduate Chair to request permission to carry the incomplete.
Medical documentation, where required, will be kept on file in the Sociology graduate program office. More details regarding incompletes are outlined in the Graduate Handbook: http://www.sociology.uwo.ca/graduate_handbook/course_information.html

Mental Health
Students who are in emotional/mental distress should refer to Health and Wellness Western for a complete list of options to obtain help: http://uwo.ca/health/mental_wellbeing/

Health and Wellness
As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. The Wellness Education Centre (lower level UCC) assists students in finding mental health and other related resources best suited to their needs. Western’s School of Graduate and Postdoctoral Studies’ Living Well website provides tips for thriving at grad school and other helpful information.

Western provides several on-campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western’s Campus Recreation Centre: Numerous cultural events are offered throughout the year. Also, we encourage you to check out the Faculty of Music web page http://www.music.uwo.ca/, and our own McIntosh Gallery http://www.mcintoshgallery.ca/.

Standards of Professional Behaviour
It is the responsibility of all members of the Department of Sociology to adhere to and promote standards of professional behaviour that support an effective learning environment. These include:

- **respect for others** both in and out of the classroom through words and actions (be professional, fair, and respectful in interactions with people on-line and in-person; understand and respect differences among classmates and colleagues; avoid disrupting the learning environment; respect others’ expectations of confidentiality and privacy)
- **active engagement in learning** and commitment to quality (being prepared for classes; participating and listening actively to other; using technology and social media appropriately, striving to do your best)
- **personal integrity** (following through on commitments; doing own work)

Students should also be aware of the UWO Student Code of Conduct found at https://www.uwo.ca/univsec/pdf/board/code.pdf