



2015 Intersession
Department of Sociology
SOC2205A – 530: Statistics for Sociology
Monday/Wednesday 1:00pm-4:00pm, BR204

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Office Hours: Monday/Wednesday 12-1pm; by appointment

Course Description

An introduction to the techniques of statistical analysis used by sociologists, including descriptive statistics, the normal curve, hypothesis testing and various measures of association.

Prerequisite(s): At least 60% in 1.0 from Sociology courses at the 1000 level.

Antirequisite(s): Biology 2244A/B, Economics 2122A/B, 2222A/B, Geography 2210A/B, Health Sciences 3801A/B, MOS 2242A/B, Psychology 2810, 2820E, 2830A/B, 2850A/B, 2851A/B, the former 2885, Social Work 2207A/B and the former 2205, Statistical Sciences 2035, 2037A/B if taken before Fall 2010, Statistical Sciences 2141A/B, 2143A/B, 2244A/B, 2858A/B and the former 2122A/B.

IMPORTANT NOTE: *Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.*

Course Overview

The course provides students with a range of practical skills, while preparing them for more advanced courses in statistics. Students will learn to apply and interpret the results of a variety of statistical techniques from both descriptive and inferential statistics; to understand the fundamental concepts in statistics including sampling, experimentation, variability, distribution, association, causation, estimation, confidence, hypothesis testing, and significance; to critically review and analyze statistical arguments found in the popular press and in scholarly journals; and to appreciate the relevance and importance of statistics.

A pocket calculator that has a square root function is required for this course.

Course Objectives

The objectives of this course are to:

Introduce students to methods of collecting data

- (1) By providing examples of methods of random sampling
- (2) By explaining correct procedures for designing experiments and observational studies
- (3) By explaining uses and misuses of sample surveys

Enable students to use statistical tools for presentation of data and to understand presentations of data

- (1) By discussing when different types of graphical displays are appropriate and explaining proper methods of constructing graphical displays
- (2) By using appropriate summary statistics to describe the distribution of data
- (3) By introducing statistical terminology used to describe data and distributions

Enable students to analyze data

- (1) By using simple linear regression for bivariate data
- (2) By constructing and interpreting confidence intervals
- (3) By conducting and interpreting hypothesis tests

Enable students to understand basic probability and statistical concepts

- (1) By presenting and using rules of probability
- (2) By discussing sampling distributions and the use of the Central Limit Theorem as the foundation of inference

Enable students to evaluate statistical procedures and summaries

- (1) By discussing assumptions and conditions for analysis procedures
- (2) By identifying sources of bias in sampling, experiment, and survey methods
- (3) By discussing appropriate nature and scope of conclusions for analysis procedures

Required Texts

David Moore, William I. Notz and Michael A. Fligner. 2013. The Basic Practice of Statistics. Sixth Edition. W.H. Freeman

Evaluation

Homework Assignments (x2)	15%
Mid-Term Exam (June 3)	40%
Final Exam (Scheduled by registrar)	45%

Homework Assignments

The two homework assignments will each be worth 7.5% of the final grade. These assignments should help you in applying concepts learned in class. Each assignment will be provided to the class two full weeks before their due date. All work can be hand written (but must be legible: non-legible work will not be marked). Independent work **is required** (i.e. students submitting identical work is considered an academic offense and may potentially lead to a grade of 0).

All homework assignments are due on the dates noted. Late assignments will only be accepted without penalty with appropriate documentation. Assignments received after the due date will have their grade reduced by a rate of 10 % per day.

Examinations

The mid-term exam will be two hours in length. The materials will be drawn from the readings, lectures and related homework assignments. This test will involve a set of problems that students will be expected to solve (i.e. with detailed calculations). There will also be a series of multiple-choice questions.

The final exam will be three hours and held during the final examination period. This exam will involve a series of multiple-choice questions and a series of problems that students will be asked to solve and interpret. It will be cumulative, covering everything from the beginning of the term.

The policies governing requests for academic accommodation for missed examinations applicable to this course are outlined in the Academic Policies and Regulations section included at the end of this course outline.

Course Schedule

<u>Date</u>	<u>Topic</u>	<u>Readings</u>
May 11	Introduction	
May 13	Picturing Distributions with Graphs	Ch. 1
May 18	NO CLASS – Victoria Day	
May 20	Describing Distributions with Numbers	Ch. 2
May 25	The Normal Distribution	Ch. 3
May 27	Scatterplots and Correlations	Ch. 4
June 1	Regression ASSIGNMENT 1 DUE	Ch. 5
June 3	Two-Way Tables	Ch. 6
June 8	MIDTERM EXAM	
June 10	Producing Data: Sampling and Experiments Probability	Ch. 8-9 Ch. 10
June 15	Confidence Intervals Tests of significance	Ch. 14 Ch. 15
June 17	Inference about Variables Inference about Relationships ASSIGNMENT 2 DUE	Ch. 18-21 Ch. 23-25
June 22/23	FINAL EXAM – Scheduled by registrar	

Mobile Phone Policy

All phones are to be shut off at the start of class, except if you have a emergency that you are having to attend to (such as an immediate family member's illness or hospitalization, or your spouse's/domestic partner's impending delivery), in which case you need to let me know at the start of class. **Text messaging is absolutely prohibited during class times.**

Communications

Email is my preferred method of contact. It should be professionally prepared, spell- and grammar-checked, and not written in "text message" format. All communications must be written from your UWO account. The subject heading should read the course title. Sign the email with your full name and student number. Expect a response within 24-48 hours, excluding weekends.

BRESCIA UNIVERSITY COLLEGE ACADEMIC POLICIES AND REGULATIONS

1. POLICY REGARDING MAKEUP EXAMS AND EXTENSIONS OF DEADLINES

When a student requests academic accommodation (e.g., extension of a deadline, a makeup exam) for work representing 10% or more of the student's overall grade in the course, it is the responsibility of the student to provide acceptable documentation to support a medical or compassionate claim. All such requests for academic accommodation **must** be made through an Academic Advisor and include supporting documentation. Academic accommodation on medical grounds will be granted only if the documentation indicates that the onset, duration and severity of the illness are such that the student could not reasonably be expected to complete her academic responsibilities. Appropriate academic accommodation will be determined by the Dean's Office in consultation with the student's instructor(s). Please note that personal commitments (e.g., vacation flight bookings, work schedule) which conflict with a scheduled test, exam or course requirement are not grounds for academic accommodation.

A UWO Student Medical Certificate (SMC) is **required** if a student is seeking academic accommodation on medical grounds. This documentation should be obtained at the time of the initial consultation with the physician/nurse practitioner or walk-in clinic. A SMC can be downloaded under the Medical Documentation heading of the following website: <https://studentservices.uwo.ca/secure/index.cfm> . If it is not possible to have an SMC completed by the attending physician/nurse practitioner, the student must request documentation sufficient to demonstrate that her ability to meet academic responsibilities was seriously affected. Please note that under University Senate regulations documentation stating simply that the student "was seen for a medical reason" or "was ill" is **not** adequate to support a request for academic accommodation. All documentation is to be submitted to an Academic Advisor.

Whenever possible, requests for academic accommodation should be initiated in advance of due dates, examination dates, etc. Students must follow up with their professors and Academic Advisor in a timely manner.

The full statement of University policy regarding extensions of deadlines or makeup exams can be found at <http://www.westerncalendar.uwo.ca/2014/pg117.html>

2. ACADEMIC CONCERNS

If you feel that you have a medical or personal problem that is interfering with your work, contact your instructor and Academic Advisor as soon as possible. Problems may then be documented and possible arrangements to assist you can be discussed at the time of occurrence rather than on a retroactive basis. Retroactive requests for academic accommodation on medical or compassionate grounds may not be considered.

If you think that you are too far behind to catch up or that your work load is not manageable, you should consult an Academic Advisor. If you consider reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines (refer to the Registrar's website, www.registrar.uwo.ca, for official dates). You should consult with the course instructor and the Academic Advisor who can help you consider alternatives to dropping one or more courses. *Note that*

dropping a course may affect OSAP eligibility and/or Entrance Scholarship eligibility.

The Dean may refuse permission to write the final examination in a course if the student has failed to maintain satisfactory academic standing throughout the year or for too frequent absence from the class or laboratory.

3. ABSENCES

Short Absences: If you miss a class due to a minor illness or other problems, check your course outline for information regarding attendance requirements and make sure you are not missing a test or assignment. Cover any readings and arrange to borrow notes from a classmate. Contact the course instructor if you have any questions.

Extended Absences: If you have an extended absence, you should contact the course instructor and an Academic Advisor. Your course instructor and Academic Advisor can discuss ways for you to catch up on missed work and arrange academic accommodations, if appropriate.

4. POLICY ON CHEATING & ACADEMIC MISCONDUCT

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/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences. Students are urged to read the section on Scholastic Offences in the Academic Calendar. Note that such offences include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course in the University or elsewhere. Students are advised to consult the section on Academic Misconduct in the Western Academic Calendar.

If you are in doubt about whether what you are doing is inappropriate or not, consult your instructor, the Student Services Centre, or the Registrar. A claim that "you didn't know it was wrong" is not accepted as an excuse.

The penalties for a student guilty of a scholastic offence (including plagiarism) include refusal of a passing grade in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

Plagiarism:

Students must write their essays and assignments in their own words. Whenever students take an idea or a passage 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 academic offence (see Scholastic Offence Policy in the Western Academic Calendar).

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the 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.

Computer-marked Tests/exams:

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating. Software currently in use to score computer-marked multiple-choice tests and exams

performs a similarity review as part of standard exam analysis.

5. PROCEDURES FOR APPEALING ACADEMIC EVALUATIONS

All appeals of a grade must be directed first to the course instructor. If the student is not satisfied with the decision of the course instructor, a written appeal signed by the student must be sent to the Department Chair. If the response of the department is considered unsatisfactory to the student, she may then submit a signed, written appeal to the Office of the Dean. Only after receiving a final decision from the Dean may a student appeal to the Senate Review Board Academic. A Guide to Appeals is available from the Ombudsperson's Office, or you can consult an Academic Advisor. Students are advised to consult the section on Academic Rights and Responsibilities in the Western Academic Calendar.

6. PREREQUISITES AND ANTIREQUISITES

Unless you have either the prerequisites for a course or written special permission from your Dean to enroll in it, you will be removed from the course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Similarly, you will also be deleted from a class list if you have previously taken an antirequisite course unless this has the approval of the Dean. These decisions may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course because you have taken an antirequisite course.

7. SUPPORT SERVICES

The Brescia University College Registrar's website, with a link to Academic Advisors, is at http://www.brescia.uwo.ca/academics/registrar_services/index.html . The Western Registrar's website is at <http://www.registrar.uwo.ca/index.cfm> . The website for the Student Development Centre at Western is at <http://www.sdc.uwo.ca/> . Students who are in emotional/mental distress should refer to Mental Health @ Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

Portions of this document were taken from the Academic Calendar, the Handbook of Academic and Scholarship Policy and the Academic Handbook of Senate Regulations. This document is a summary of relevant regulations and does not supersede the academic policies and regulations of the Senate of the University of Western Ontario.