

Statistical Sciences 2143 Course Outline

1. Course Information

Course Information

Statistical Sciences 2143
2021-2022 Winter Term

Lectures: Monday, Wednesday, Friday 1:30-2:30 pm
Location: ONLINE/MC-110

Tutorial: Thursday 11:30 am - 12:30 pm
Location: ONLINE/WSC-55

From January 10 to January 31, all lectures are scheduled online with synchronous Zoom lecturing. Any change will be noted in advance.

Constraints

RESTRICTED TO CHEMICAL, GREEN PROCESS, MECHANICAL, MECHATRONICS, INTEGRATED, COMPUTER AND CIVIL ENGINEERING STUDENTS, SCIENCE STUDENTS AND SCHOLARS ELECTIVES.

This course cannot be taken for credit in any module in Data Science, Statistics, Actuarial Science, or Financial Modelling, other than the Minor in Applied Statistics or the Minor in Applied Financial Modeling.

Requisites

0.5 course from Numerical and Mathematical Methods 1412A/B, Calculus 1000A/B, Calculus

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.

2. Instructor Information

- Difference between two proportions
- Bivariate data
- Regression
 - Correlation
 - Model building
 - Parameter estimation
 - Two-way contingency tables
 - Simpson's paradox (in contingency tables, regression, and in other forms)
 - Analysis of variance (ANOVA)
- Pitfalls and controversies

Classes begin: January 10, 2022

Family Day and Spring Reading Week: February 19-27, 2022

Classes end: April 8, 2022

Course delivery and assessment with respect to the COVID pandemic

Although the intent is for this course to be delivered in-person to the extent possible, the changing COVID-19 landscape may necessitate some or all of the course to be delivered online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience), as deemed most appropriate by the instructor. The grading scheme will not change. Any assessments affected will be conducted online as determined by the course instructor.

When deemed necessary, tests and examinations in this course will be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledging that you will be required to provide personal information (including some biometric data) and that the session will be recorded. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: <https://remoteproctoring.uwo.ca>

4. Course Materials

Required Textbook

(Tenth Edition) by David S. Moore, George P. McCabe, and Bruce Craig <https://www.macmillanlearning.com/college/ca/product/Introduction-to-the-Practice-of-Statistics/p/1319244440>

We aim at covering the entire textbook, but we shall surely cover Chapters 1-13

Recommended Online Learning Platform

Achieve for integrates outcome-based learning objectives and a wealth of examples with assessment in an easy-to-use interface. Students are provided with rich digital resources that solidify conceptual understanding, as well as homework problems with hints, answer-specific feedback, and a fully worked solutions. <https://achieve.macmillanlearning.com/start>

Useful

Date	Textbook	Notes
Jan 10		Course outline. OWL. Textbook. Achieve. Q & A.
Jan 12		
Jan 13		
Jan 14		
Jan 17		
Jan 19		
Jan 20		
Jan 21		
Jan24	TEST 1	Location: ONLINE. Multiple choice. Closed book. Cumulative.
Jan 26		
Jan 27		

Feb

Note that in all cases, students are required to contact their instructors within 24 hours of the end of the period covered, unless otherwise instructed in the course outline.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For the policy on Academic Consideration for Student Absences – Undergraduate Students in First Entry Programs, see:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf

and for the Student Medical Certificate (SMC), see:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

Religious Accommodation

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at

<https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>.

Absences from Final Examinations

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf,

8. Academic Policies

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf,

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

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.

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 (<http://www.turnitin.com>).

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

In the event of health lockdown, remote proctoring software may be used in this course By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (<http://www.health.uwo.ca/mentalhealth>) for a complete list of options about how to obtain help. Additional student-run support services are offered by the USC, <http://westernusc.ca/services>.