

SS9030B Course Outline

1. Course Information

Course Information

Course Number: SS9030B
Course Name: Statistical Inference
Academic Term: Winter 2024
Lectures: Tue: 10:00-11:30am, Thu:10:00-11:30am
Class Room : WSC 256

List of Prerequisites

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

Instructors	Email	Office	Phone	Office Hours
Dr. Wenqing He	whe@stats.uwo.ca whe23@uwo.ca	WSC213	519-6612111 ext. 86982	Thu. 11:30am- 12:30pm
TA: Yuan Bian	ybian44@uwo.ca			

Students must use their Western (@uwo.ca) email addresses when contacting their instructors.

3. Course Syllabus, Schedule, Delivery Mode

Learning Outcomes

This course is intended to provide students with an understanding of the theory of statistical inference, including point and interval estimation, hypothesis testing, as well as the assessments of the procedures. By the end of the course, students are expected to be able to identify the estimators for quantities of interest, and optimal tests for hypotheses

Table of Contents and Schedule

1. Essential Preliminaries
2. Data Reduction
3. Point Estimation
4. Hypothesis Testing
5. Interval Estimation
6. Asymptotic Inference

Key Sessional Dates

Classes begin: January 8, 2024
Reading Week: February 17 – 25, 2024
Classes end: April 8, 2024

Contingency plan

Although the intent is for this course to be delivered in person, should any university-declared emergency require some or all of the course to be delivered online, either synchronously or asynchronously, the course will adapt accordingly. The grading scheme will **not** change. Any assessments affected will be conducted online as determined by the course instructor.

4. Course Materials

Main Reference Book:

Statistical Inference 2nd Edition, by George Casalla and Roger Berger, DUXBURY, 2002.

Students are responsible for checking the course OWL site (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

Assignments (3)	_15_%
Two tests	_60_%
Final take home exam	_25_%

Three assignments are due in class on

Feb. 6
Mar. 5
Apr. 4 (at the end of the day)

Two tests will be taken in class (10:00-11:20am) on

Feb. 15 (30%)
Apr. 4 (30%)

Final take home exam (24 hours)

Apr. 8, 5:00 pm to April 9, 4:59 pm (Canadian Eastern Time)

Course-specific conditions that are required to pass the course:

If two out of the three tests (exams) are missed, the student will receive an incomplete (INC) in the course grade. The student will get assessment from the next time the course is offered.

Accommodated Evaluations

- Late assessments without valid medical or supporting documentation will be counted 0.
- Late assessments with valid medical or supporting documentation should be submitted within 24 hours.
- No make-up tests. If valid documents are provided, the weight of one test will be redistributed to either the other test or the final project, determined by the instructor.
- If the two tests are missed with whatever reasons, the student will receive an incomplete (INC) in the course grade. The student will get assessment from the next time the course is offered.
- **If two out of the three tests (exams) are missed, the student will receive an incomplete (INC) in the course grade. The student will get assessment from the next time the course is offered.**

Rounding of Marks Statement

Across the Sciences Undergraduate Education programs, we strive to maintain high standards that reflect the effort that both students and faculty put into the teaching and learning experience during this course. All students will be treated equally and evaluated based only on their actual achievement. *Final grades* on this course, irrespective of the number of decimal places used in marking individual assignments and tests, will be calculated to one decimal place and rounded to the nearest integer, e.g., 74.4 becomes 74, and 74.5 becomes 75. Marks WILL NOT be bumped to the next grade or GPA, e.g. a 79 will NOT be bumped up to an 80, an 84 WILL NOT be bumped up to an 85, etc. The mark attained is the mark you achieved, and the mark assigned; requests for mark “bumping” will be denied.

6. Student Absences

If you are unable to meet a course requirement due to illness or other serious circumstances, please follow the procedures below.

Assessments worth less than 10% of the overall course grade:

In the assessments of this course, only each assignment has less than 10% of the overall grade. You will be given around 2 weeks for each assignment; thus, no academic considerations will be considered for not submitting your assignment on time. If you are not able to come to class to hand in the assignment, electronic form of assignment is allowed to be submitted before the class of the due date.

Assessments worth 10% or more of the overall course grade:

For work totalling 10% or more of the final course grade, you must provide a valid medical proof to the instructor as soon as possible.

For further information, please consult the University’s medical illness policy at

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

The Student Medical Certificate is available at

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

No make-up tests. If valid documents are provided, the weight of one test will be redistributed to either the other test or the final project, determined by the instructor. If the two tests are missed with whatever reasons, the student will receive an incomplete (INC) in the course grade. The student will get assessment from the next time the course is offered.

7. Accommodation and Accessibility

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>.

Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

[https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic Accommodation_disabilities.pdf](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 their official university address is attended to in a timely manner.

One double-sided letter-size cheat sheet is allowed for the tests.

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.

9. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at

http://academicsupport.uwo.ca/accessible_education/index.html

if you have any questions regarding accommodations.