**Department of Statistical and Actuarial Sciences**

**SS9030B Course Outline**

**1. Course Information**

**Course Information**

**Course Number**: SS9030B

**Course Name**: Statistical Inference

**Academic Term**: Winter 2025

**Lectures:**  Tue: 10:00-11:30am, Thu:10:00-11:30am

**Class Room**: WSC 248

**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](mailto:whe@stats.uwo.ca)  whe23@uwo.ca | WSC213 | 519-6612111 ext. 86982 | Thu. 11:30am-12:30pm |
| TA: |  |  |  |  |
|  |  |  |  |  |

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. AsymptoticInference

**Key Sessional Dates**

Classes begin: January 6, 2025

Reading Week: February 15 – 23, 2024

Classes end: April 4, 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 (https://westernu.brightspace.com/d2l/login) 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.

**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. 4

Mar. 4

Apr. 3 (at the end of the day)

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

Feb. 13 (30%)

Apr. 3 (30%)

Final take home exam (24 hours)

Apr. 6, 10:00 am to April 7, 9:59 am (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 exam, determined by the instructor.
* **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. Additional Statements**

**Religious Accommodation**

When conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible but not later than two weeks prior to the writing or the examination (or one week prior to the writing of the test).

Please visit the Diversity Calendars posted on our university’s EDID website for the recognized religious holidays:

[https://www.edi.uwo.ca](https://www.edi.uwo.ca/).

**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%20Accommodation_disabilities.pdf).

**Academic Policies**

The website for Registrar Services is <https://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.

**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:

<https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf>.

**Support Services**

Please visit the Science & Basic Medical Sciences Academic Advising 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.