

# **Introduction to Study Design (SS3843A)**

## **Course Outline (Fall 2022)**

### **1. Course Information**

#### **Course Information**

Course Name: Introduction to Study Design (SS3843A)

Lecture Hours:

### 3. Course Syllabus, Schedule, Delivery Mode

The course consists of two main sections: survey sampling and experimental design. Topics of survey sampling covers include simple random sampling, ratio and regression estimation, stratified random sampling and cluster sampling. Topics of experimental design include fundamentals (randomization, blocking, replication), randomized designs, ANOVA, randomized block designs and factorial designs with two-way interactions.

Lecture hours: Monday, Wednesday, Friday 8:30 – 9:30 AM.

All lectures are delivered in person.

Below is the tentative weekly schedule.

<b>Week</b>	<b>Topics</b>
1	Review of estimation and mean squared error
2	Simple probability sampling
3	Stratified sampling
4	Ratio and regression estimation
5	Cluster sampling, Review
6	

Software: We will use **R** for covering examples. Laptop or personal computer with R/RStudio installed is recommended.

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.

All R codes that we use in class will be posted to OWL: <http://owl.uwo.ca>.

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 (2)	10%
Quizzes (2)	10%
Midterm Tests (2)	40%
Final Exam	40%

### Assignments

There will be **two homework assignments (each is worth 5%)**

**The student must contact the instructor to confirm the weight transfer. A weight transfer will only be made with an approval from the Academic Counselling Office AND the confirmation from the instructor.**

### **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

## **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:**

If you fail to meet the deadline of an assignment due to a legitimate reason (**to be determined by academic counsellors**), you must contact the instructor within 24 hours of the assignment deadline. A one-

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

For work totalling 10% or more of the final course grade, you must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. For further information, please consult the Univer

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_medical.pdf](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](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf).

### **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).

than 2 exams in 23-hour period, more than 3 exams in a 47-hour period). e.g., more

**Note:** missed work can *only* be excused through one of the mechanisms above. Being asked not to attend an in-person course requirement due to potential COVID-19 symptoms is **not** sufficient on its own.

## **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 c

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](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](mailto: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](http://academicsupport.uwo.ca/accessible_education/index.html)

if you have any questions regarding accommodations.