Department of Statistical and Actuarial Sciences

1. Course Information

Official Schedule: Tuesday, 1:30-3:30 PM
Tutorials: Friday, 10:30 AM

Introduction to Statistics

Statistical Science 1024B Section 002 Winter 2021

List of Prerequisite(s)
Grade 12U Mathematics or Mathematics 0110A/B or Mathematics 1229A/B

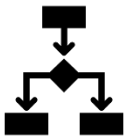
List of Antirequisite(s)
All other courses or half courses in Introductory Statistics, except Statistical Sciences 1023A/B and Statistical Sciences 2037A/B. For a full list of Introductory Statistics courses, see https://www.westerncalendar.uwo.ca/Departments.cfm?DepartmentID=55. You cannot take a listed anti-requisite course concurrently with Statistical Sciences 1024A/B.

Office hours and tutorials: *via email and/or Zoom.*
The instructor will be available at the end of the synchronous lectures.
The weekly tutorials will take place on Fridays at 10:30 a.m.

As well, solved problems will be posted on the course websites.

Students must use their Western (@uwo.ca) email addresses when contacting the instructors and the teaching assistants and indicate the course number (SS1024) in the subject line.

3. Course Syllabus and Delivery Mode



Type	Mode	Schedule	Frequency
Lectures	Online	Tuesday 1:30-3:30 PM	Weekly

Learning Outcomes

Upon successful completion of this course, students will have a basic understanding of

- The techniques utilized in exploring, organizing, describing and analyzing data
- The collection of data through surveys and experiments
- Probabilistic principles
- Statistical inference: including confidence interval construction and tests of hypotheses

8	**Dates:** March 8 March 12	
	Ch 12: Introducing Probability	**Sections 12.1-12.8:** Randomness, probability models, probability rules, finite, continuous, random variables, personal probability
	Ch 13: General Rules of Probability	**Sections 13.1-13.5:** Addition rule, independence, multiplicative rule, conditional probability
	Ch 14: Sampling Distributions	**Sections 14.1-14.6:** Parameters, statistics, law of large numbers, sampling distributions, central limit theorem, statistical significance
9	**Dates:** March 15 March 19	
	Ch 15: Confidence Intervals	**Sections 15.1-15.4:** Statistical estimation, margin of error, confidence intervals for a population mean
10	**Dates:** March 22 March 26	
	Ch 16: Tests of Significance	**Sections 16.1-16.5:** Hypotheses, P-values, tests for a population mean
	Ch 17: Inference in Practice	**Sections 17.1-17.5:** Conditions, cautions, sample size for confidence intervals, power of a statistical test (definition only)
	Chapter 18 is a review chapter	
11	**Dates:** March 29 April 2	
	Ch 19: Inference about a Population Mean	**Sections 19.1-19.4,19.6:** t-distribution, one-sample t confidence interval, one-sample t test, matched pairs
12 - 13	**Dates:** April 5 April 12	
	Ch 20: Comparing Two Means	**Sections 20.1-20.3, 20.5-20.8:** 1 91.1.18 45.984 reW* nBT/F2

4. Course Materials

A customized loose-leaf textbook is required: *The Basic Practice of Statistics* by Moore, Notz and Fligner. The customized textbook includes a subscription to Sapling. Sapling Learning is an online learning system that can be used as an extra resource as you take this course. This supplement includes resources (i.e., supplementary videos, online applets, tutorials and extra practice problems) that will be particularly useful for any concepts you find challenging. The customized version is available online from the UWO Bookstore. The posted materials will refer to the customized version.

Note that this customized version is based on the 8th Edition of the textbook of the same name. (An electronic copy is available at the BookStore.) Therefore, if you are unable to obtain a copy of the customized book, the standard 8th Edition will suffice (but may be more expensive). However, note that our listed chapter indices are with respect to the customized textbook. Chapters 14-21 in the customized textbook correspond to Chapters 15-22 in the standard 8th Edition.

Students should check OWL (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.

5. Methods of Evaluation

The overall course grade will be calculated as follows:

* *Four assignments worth in total 20%* (the best three out of four will be counted)
* *A two-hour midterm exam* worth 30%, tentatively scheduled to take place on Wednesday, February 24 at 10 a.m.
* *A three-hour final exam* worth 50% to be scheduled

7. Academic Policies

In accordance with policy, http://www.uwo.ca/its/identity/activatenonstudent.html, the centrally administered e-
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.