



ECON 245 A01/A02

Descriptive Statistics and Probability

Fall Session: 2025 09 – Term 1, CRN 11089-11094, 1.5 Unit Value,

Lecture A01 TWF 8:30 -9:20 am David Strong Building C118

Lecture A02 TWF 12:30 -1:20 pm David Strong Building C118

Labs: Tuesday B01 1:30 pm Clearhue A108

Tuesday B02 2:30 pm BEC 170

Wednesday B03 2:30 pm Clearhue A031

Wednesday B04 3:30 pm Clearhue A105

UVic Land Acknowledgement

We acknowledge and respect the Ləkʷəŋən (Songhees and Xʷsepsəm/Esquimalt) Peoples on whose territory the university stands, and the Ləkʷəŋən and W̱SÁNEĆ Peoples whose historical relationships with the land continue to this day.

Instructor Name: Betty Johnson

Office: BEC 324

E-Mail: bettyj@uvic.ca

Method of contact and availability:

Office Hours: Wednesday 1:45 – 2:30 pm or by appointment on zoom:

<https://uvic.zoom.us/j/89259287012?pwd=ZlVhYzgrNElBZENaG5ZaGQ0YVhJUT09>

TEAM Members:

TA Name: Joshua

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Teaching and assessment modality statement

This course is face to face and all exams are held in person. Attendance is not mandatory but encouraged. There are no plans to hold any classes online. If illness occurs, I will post an online video in place of regular class.

Course Content

“Introduction to statistics and probability theory. Key topics include elementary probability, discrete and continuous random variables, as well as descriptive statistics of univariate and bivariate data. Introduction to basic programming and data visualization using R and Excel.”

The objective of this course is to introduce you to techniques and tools to deal with economic data and economic applications. Probability theory and descriptive statistics are central to modern applied economics. A clear understanding of such ideas is important in the subsequent study of economics.

Economics 245 is the foundation of a series of courses in the teaching of quantitative economics. In particular, it will introduce you to basic statistical concepts and characteristics of economic data. By providing insight into various economic data sets, you will be better equipped to summarize and interpret economic events in a meaningful and efficient fashion.

The course is roughly divided into two components: (i) descriptive economic statistics and (ii) probability and random variables. Part (i) deals essentially with how to **describe** and **summarize** characteristics of economic data. In the process of doing this we will learn about some aspects of data manipulation that are central to the way in which agencies, such as Statistics Canada, publish economic information. Part (ii) provides **applications** of probability, and **insight** into the statistical characteristics of random sampling. Such background material is necessary for us to subsequently learn about statistical inference, a topic that forms the basis for Economics 246.

Course prerequisites/corequisites

Prerequisites

- Complete 1 of:
 - [MATH100](#) - Calculus I (1.5)
 - [MATH102](#) - Calculus for Students in the Social and Biological Sciences (1.5)
 - [MATH109](#) - Introduction to Calculus (1.5)

Pre- or corequisites

- Complete all of the following
 - Completed or concurrently enrolled in 1 of:
 - [ECON103](#) - Principles of Microeconomics (1.5)
 - [ECON103C](#) - Introduction to Principles of Microeconomics and Financial Project Evaluation (1.5)
 - [ECON180](#) - Introduction to Economics and Financial Project Evaluation (1.5)
 - Completed or concurrently enrolled in all of:
 - [ECON104](#) - Principles of Macroeconomics (1.5)

Repeating Courses

Be aware of the policy regarding the repeating of courses; see [University Calendar](#).

In order to request permission to attempt this course for the third time, you must follow the instructions provided under the [Repeating Courses](#) policy on the Economics website.

Failure to obtain permission will result in deregistration from the course.

Textbook

<https://collection.bccampus.ca/textbooks/introductory-statistics-openstax-200/>



Author	Barbara Illowsky and Susan Dean
Publisher	OpenStax
Publish Date	2013
Level	Undergraduate
License	CC BY 4.0

Brightspace

Brightspace is used extensively for the course. All students are expected to be fully functional with the system. The lecture notes will be posted in *Brightspace*. Please note that the lecture notes online are only outlines of the actual lectures.

All announcements will be posted in *Brightspace*. Students are advised to check it frequently.

Minimum Grade Requirements

Here are all the ECON grade requirements for FME, BA and BSc students listed. Students pursuing an Honours degree should consult the academic calendar. ECON203 and 204 have a C as minimum program requirement, can't take ECON313 without a minimum C in 203, **ECON245 has a C+ program requirement, can't take ECON345 without a minimum C+ in ECON245**, ECON350 has a C minimum program requirement, ECON313 has a B- minimum grade requirement for ECON435 and ECON454 and for the FME in general. There is no grade requirement on ECON313 for students pursuing the BA or BSc in Economics without the finance option.

Learning Outcomes

- *Present and calculate summaries appropriately when describing and analyzing basic data sets using economic data.*
- *Calculate and comprehend simple probability using simple or multivariate models.*
- *Display personal understanding of Canadian data collection agencies.*
- *Demonstrate elementary programming using R and Excel.*

Course Structure, Assessments, and Grading

Statement about learning components

Lectures are presented live, live-streamed on zoom and recorded and posted on Brightspace.

Assignments are posted on and submitted on Brightspace.

Labs are posted on and submitted on Brightspace.

Use of AI

I stopped using AI a few years ago. AI should not be used for assignments and labs unless otherwise stated.

Grading Scheme

The course grade is determined as follows:

3 homework assignments, each carrying a weight of 5%.

5 in-person midterm exams, each carrying a weight of 15%.

8-10 lab assignments, each carrying a weight of approximately 1%.

Mandatory/Essential Course Components

All exams are essential course requirements, meaning, they must be attempted in order to pass the course. Note that essential course requirements are deferrable, the midterms are considered essential and thus deferrable by definition. Failure to complete the five tests will result in a grade of "N" regardless of the cumulative percentage on the course. N is a failing grade and factors into GPA as a value of 0.

Attendance: *Attendance is voluntary but encouraged.*

Dates of Assessments, Due Dates of Assignments

Assignment(s): Assignments are posted on Brightspace. Please upload your assignment by midnight on the due date:

Assignment #1 -- due October 4

Assignment #2 -- due October 25

Assignment #3 -- due November 22

Midterm(s): The midterm exams are scheduled for: Midterm #1: September 19

Midterm #2: October 10

Midterm #3: October 31

Midterm #4: November 14

Midterm #5: November 28

Held during class time. Information and coverage will be available one week before the exam.

Students are advised not to make work or travel plans until after the examination timetable has been finalized. Students who wish to finalize their travel plans at an earlier date should book flights that depart after the end of the examination period. Students do not qualify for an academic concession if travel plans conflict with the examination.

Grading Scale

A+	90-100%
A	85-89%
A-	80-84%
B+	77-79%
B	73-76%
B-	70-72%
C+	65-69%
C	60-64%
D	50-59%
F or N	0-49%

Students should review the University's more detailed [summary of grading](#).

Missing Assessments

Should students encounter a situation where they miss an exam or cannot submit an assignment at its due date, they may qualify for an academic concession. Students are required to indicate the specific grounds on which they are requesting an academic concession and provide a justification outlining the impact of the circumstances on their ability to complete course requirements. For in-course extensions, please [fill in the form and follow the instructions on the form](#).

Waitlist Policies

- Instructors have no discretion to admit waitlisted students or raise the cap on the course.
- Students on the waitlist should discuss with the instructor how to ensure they are not behind with coursework in the event they are admitted.
- Registered students who do not participate as specified in this outline during the first 7 calendar days from the start of the course may be dropped from the course.
- Registered students who decide not to take the course are responsible for dropping the course and are urged to do so promptly out of courtesy toward waitlisted students.
- Waitlist offers cease after the last date for adding courses irrespective of published waitlists.

Academic Integrity

Academic integrity requires commitment to the values of honesty, trust, fairness, respect, and responsibility. Students are expected to observe the same standards of scholarly integrity as their academic and professional counterparts. A student who is found to have engaged in unethical academic behaviour, including the practices described in the [Policy on Academic Integrity](#) in the University Calendar, is subject to penalty by the University.

The University reserves the right to use a plagiarism software to detect violations of academic integrity.

Appeals

Depending on the nature of your concern, the order in which you should normally try to resolve the matter is:

1. Me, the course instructor
2. the Associate Chair: econassoc@uvic.ca
3. the Associate Dean of Academic Advising
4. the Senate.

If you're seeking a formal review of an assigned grade, you should also consult the regulations in the academic calendar regarding [review of an assigned grade](#)."

I prefer to deal with grade inquiries on assignments and exams in writing.

University Policies and Statements

Please note that this course is executed in a manner consistent with these University statements and policies.

- a. University Calendar - Section "[Information for all students](#)"
- b. [Creating a respectful, inclusive and productive learning environment](#)
- c. [Academic Integrity](#)
- d. [Academic Concession Regulations](#), [Academic Concession and Accommodation](#), Academic Accommodation – [Policy AC1205](#)
- e. [Accommodation of Religious Observance](#)
- f. [Student Conduct](#)
- g. [Non-academic Student Misconduct](#)
- h. [Accessibility](#)
- i. [Diversity / EDI](#)
- j. [Equity statement](#)
- k. [Sexualized Violence Prevention and Response](#)
- l. Discrimination and Harassment [Policy](#)

Resources for students

- a. [Student wellness](#)
- b. [Centre for Accessible Learning](#)
- c. [UVic Learn Anywhere](#). UVic Learn Anywhere is the primary learning resource for students that offers many learning workshops and resources to help students with academics and learning strategies.
- d. [Library](#) resources
- e. Centre for Academic Communication ([CAC](#))
- f. Learning Strategies Program ([LSP](#))
- g. [Academic Advising](#)
- h. Economics Undergraduate Advising: ecadvice@uvic.ca
- i. [Student Awards and Financial Aid](#)
- j. [International Student Advising](#)
- k. Indigenous student services ([ISS](#))
- l. [Student groups and resources](#) including UVic [Ombudsperson](#)

Student Experience of Learning (SEL) Survey

I value your feedback on this course. Towards the end of term, you will have the opportunity to complete a confidential SEL survey regarding your learning experience. The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future.

Course Structure

<i>Week</i>	<i>Topic</i>	<i>Chapter</i>	<i>Assessment</i>
1-2	Topic 1: Introduction Topic 2: Descriptive Statistics	1, 2	
3-4	Topic 2: Descriptive Statistics	1, 2	Exam Info: Midterm #1 by September 12 Labs start: September 16 Midterm #1 Sept. 19
5-6	Topic 3: Probability	3	Assignment #1 October 4 <i>No labs on Sept 30 & October 1</i> Info on Midterm #2 posted by October 3. Midterm #2 October 10
7-8	Topic 4: More Probability	3	Due Dates: Assignment #2 due October 25 Exam Info: October 24
9-10	Topic 5: Discrete Random Variables	4	Midterm #3 October 31 Exam Info: posted by Nov. 7
11-12	Topic 6: Continuous Random Variables	5	Assignment 3 due Nov. 22 Midterm #4 Nov. 14 Exam Info: by Nov. 21
13-14	Topic 7: Normal Distribution	6	Midterm #5 Nov 28

E-mail Correspondence

Emails should be limited to critical matters, such as inability to attend class, an exam, or prolonged illness, and should include the course name and number in the subject line. Questions on course material should be asked during office hours or in class. The standard format for writing a letter must be used. This means it should begin with a salutation (e.g. Dear....), include full sentences and it must conclude with a signature that includes your **full name and V#**. Text message lingo should not be used.

Electronic Devices

Non-programmable calculators are permitted during exams.

Educational Technology involving storage outside Canada

N/A