



ECON 245 A01
DESCRIPTIVE STATISTICS AND PROBABILITY
CRN 21051 (Lectures); 21052, 21053, and 21054 (Labs)

Winter Session: Jan. – Apr. 2023 – Second Term

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Office Hours: Mondays 10:00 – 11:30 a.m. and via appointment – please email.

Land Acknowledgement

We acknowledge with respect the Lekwungen peoples on whose traditional territory the University of Victoria stands, and the Songhees, Esquimalt and WSÁNEĆ peoples whose historical relationships with the land continue to this day.

Course Content

Understanding and interpreting data is important to answer many questions in Economics. ECON 245 is a foundational course in Economics that provides a rigorous introduction to statistics and probability theory. In addition to ensuring students are familiar with the theory, the course will also introduce techniques to describe and summarize economic data.

The key topics include descriptive statistics, elementary probability, random variables, discrete and continuous probability distributions and time series analysis. In addition to lectures, to ensure reliable understanding of economic questions and data, the course includes laboratory classes where students will learn computing techniques for applications of the concepts learned in class. To help with furthering the understanding of the material, there will be assignments, a midterm and a final examination.

Prerequisites can be found [here](#).

Minimum Grade Requirement: students require a minimum grade of C+ in this course to complete a major in Economics.

Lectures: Monday and Thursday 08:30 a.m. - 09:50 a.m. **MacLaurin Building** - Room: **D207**

Lecture notes will be available on Brightspace as PDFs. In addition to the class notes, students are expected to work from their own notes and are strongly encouraged to attend all lectures to take their own notes during class.

Laboratory Classes: Are held weekly and their times depend on the section students are enrolled in. Students are required to register in one of the following sections:

B01: Thursdays 02:30 p.m. - 03:20 p.m.

B02: Thursdays 03:30 p.m. - 04:20 p.m.

B03: Fridays 02:30 p.m. - 03:20 p.m.

Exercises with instructions for each laboratory will be posted on Brightspace.

Laboratory classes cover formal class material. Laboratories run all through term, starting on the second week of term (Jan. 16th 2023). During the last week of term (April 3rd 2023) there will be a review class rather than a lab.

We will be mostly using Excel during the course. The main objective of the laboratory classes is to understand and implement empirical applications of the topics covered in the formal lectures. Students' solutions and/or output from labs are to be submitted at the end of the laboratory. Our senior lab instructor is Nicholas Karlson.

Textbook:

The required textbook is: *Statistics for Business & Economics (14th ed.)* by Anderson, D. R., Sweeney, D.J., Williams, T. A., Camm, J. D., Cochran, J. J., Fry, M. J., & Ohlmann, J. W. (2019). United States: Cengage Learning.

The ISBNs are:

- Digital Platform (WebAssign) - ISBN: 9780357030196 (\$73.95)
- eTextbook - ISBN: 9780357540282 (\$74.95)
- Hardcopy - ISBN: 9781337901062 (\$174.95)

Please Note: we will **not** be using the WebAssign feature for class, but that option allows you to have extra practice problems and includes an eTextbook. Older editions are fine as well.

Course Reserve: There is a copy of the textbook on reserve at the library which you can check out for *two hours*.

Additional supplementary materials will be provided as PDFs on Brightspace.

Grading:

Course Assessments:

	<u>Percent of Final Grade</u>	<u>Due Dates</u>
Assignments (best 4 of 5)	20%	See course calendar.
Midterm Exam	30%	Thursday, Feb. 16 2023
Final Exam	40%	TBA
Laboratories	10%	At the end of each lab.

Assignments (best 4 of 5): 20% There will be five assignments throughout the course with the *best four* counted. Students will have one week to complete an assignment. Each assignment is worth 5% of the total grade. The main goal of assignments is to allow students in-depth understanding and implementation of the materials and knowledge obtained from the lectures and laboratory classes and to prepare students for exams and future courses.

Late Assignments: Assignments are due in class at 8:30 a.m. on the due date. Out of respect for those students who do submit assignments on time, late assignments will not be accepted unless prior arrangement (at least 24h prior to the deadline) has been made with the course instructor. Given that *only the best four* assignments will count towards the final grade, if a student misses an assignment due to medical reasons or exceptional circumstances, and can provide documentation, this assignment will be automatically dropped. Please use [this](#) form to ask for an in-course academic concession.

Midterm Exam: 30% There will be one 90-minute midterm on Thurs. Feb. 16, 2023. In the event that students miss the midterm due to illness or family affliction, a make-up exam must be taken during the department's sessions for make-up exams.

Final Exam: 40% The final examination will be a comprehensive 3-hour exam. It will be scheduled by the Registrar’s Office and a timetable will be posted by the end of February. Please wait until the final examination timetable is available before making any plans to leave Victoria.

Laboratories: 10% There are 10 laboratory classes scheduled (recall that the last one will be a review session not a laboratory). At the end of each laboratory class students are to submit the solutions to the exercises, including computer output. Please note that in line with academic integrity policies, students must submit their own work.

If students miss a lab due to medical reasons or exceptional circumstances, and can provide reasonable documentation, the weight of the uncompleted laboratory will be reassigned equally to the other laboratories.

Students who have questions or concerns regarding a grade for an assessment should notify the instructor as soon as possible. All concerns should be addressed during office hours (please see email policy), with specific questions and formal arguments (i.e., no “why did I get this grade?” rather: “I believe there is an error in the grading because after further investigation I have found that XYZ...”.) Any concerns must be dealt with within one week after the grade was returned, otherwise, the grade is final.

Ensuring Progress and Learning: We will start this course by doing a review of mathematics and notation. An important aspect of learning statistics and probability involves familiarizing yourself with the intuition behind core concepts. In order to do this, I *strongly* encourage that students practice and review calculus as well as “speaking the language” of statistics and probability. What I mean by this, is that students try to familiarize themselves with the meaning behind the formulas and operations, rather than simply reading the variables – e.g., while reviewing the material I encourage students to try to “translate” a formula or the operation performed to plain English next to the mathematical notation. I will provide examples of how to do this during our first week.

Additionally, regularly trying and practicing problem sets and exercises will be the most effective way to develop the skills needed to succeed in this class. When doing exercises, I strongly encourage students to identify and clearly denote each of the steps taken when performing operations (until a concept is crystal clear, I’d further motivate students to continue “translating” to plain English next to each step) to answer a question. This will help clarify the steps involved in a solution and will provide the basis of preparing for assessments as students will need to show their work.

Similarly, please know that I will always be happy to provide additional support during office hours. I strongly encourage students to come to office hours to seek additional help, especially if struggling with a particular subject. While I will not provide the solutions directly, I will help students understand the concepts so that they can arrive at the answers or understanding independently.

Grading Scale:

All course components above will be assessed following a numerical score. Each component of the course will be then assigned the appropriate weight resulting in a total final score out of 100. The following grading scale will be used:

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

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

Brightspace: Brightspace is used extensively for the course. Materials for the course (including lecture notes, assignments, lab instructions, additional reading materials, practice questions, solutions, announcements and

grades) will be posted on Brightspace. It is essential that students familiarise themselves with the system and students are strongly advised to check it frequently.

There will be an Administration Discussion Board on Brightspace. The purpose of the board is for students to ask any administrative question about the course. I encourage students to check the syllabus or announcements prior to posting a question in case the answer is already answered.

E-mail Correspondence: I will do my best to respond to e-mails within 24 hours on a weekday, 48 hours on a weekend, according to the following policy:

- a. E-mails 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. I will respond to emails posing questions that can be answered in a sentence or two. For detailed questions, please see me during office hours.
- b. Questions on course material should be asked during office hours or in class.
- c. 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 must be avoided.
- d. I will not reply to e-mails that request information that can be found on Brightspace or the syllabus, please check those places first. For administrative questions, please go to the Discussion Board.
- e. I will not reply to e-mails regarding the results of graded material – for that, please see me during office hours.

Office Hours: The default format for this term is in-person office hours (BEC376). During office hours, if you cannot make it to campus, we can also arrange to meet via Zoom. If there is a scheduling conflict with the time allocated for regular office hours, please email in advance (at least 24h) to make an appointment to meet via Zoom.

Please note that this is subject to change depending on new developments with Covid-19 throughout the term.

Zoom Link: click [here](#).

For questions regarding the course material, please come prepared and review the lecture notes and book chapters beforehand.

Electronic devices

Use of mobile phones is prohibited during lectures and laboratories. Students can take notes with laptops and tablets.

Course Outline:

- Review of Basic Concepts and Notation
- Introduction to Data and Statistics (Ch. 1)
- Descriptive Statistics: Tabular and Graphical Displays & Numerical Measures (Ch. 2 & 3)
- Index Numbers
- Time Series Analysis and Forecasting (Ch. 20)
- Introduction to Probability (Ch. 4)
- Discrete Probability Distribution
- Continuous Probability Distributions (Time Permitting)
- Decision Analysis (Time Permitting)

Course Calendar:

ECON 245 Winter 2023 Term II:

<u>Week</u>	<u>Dates</u>	<u>Monday</u>	<u>Thursday</u>	<u>Labs</u>
1	Jan. 9 - 13	Course Overview	Review & Ch. 1	
2	Jan. 16 - 20	Ch. 1	Ch. 2	x
3	Jan. 23 - 27	Ch. 2 (Assignment #1 due)	Ch. 3	x
4	Jan. 30 - Feb. 3	Ch. 3	Ch. 20	x
5	Feb. 6 - 10	Ch. 20 & 17 (Assignment #2 due)	Ch. 17	x
6	Feb. 13 - 17	Ch. 17 & Review	Midterm (Feb. 16, 2023)	x
7	Feb. 20 - 24	Reading Break		
8	Feb. 27 - Mar. 3	Ch. 17	Ch. 4	x
9	Mar. 6 - 10	Ch. 4 (Assignment #3 due)	Ch. 4	x
10	Mar. 13 - 17	Ch. 5	Ch. 5	x
11	Mar. 20 - 24	Ch. 5 (Assignment #4 due)	Ch. 6	x
12	Mar. 27 - 31	Ch. 6	Ch. 19 (Time Permitting)	x
13	Apr. 3 - 7	Ch. 19 (Time Permitting)	Review (Assignment #5 due)	Review

Please note: the calendar is subject to minor changes depending on the pace of the course.

Additional Course Policies

This course adheres to the [Undergraduate Course Policies](#) of the Department of Economics that deal with the following issues:

- Academic concessions
- Academic integrity (plagiarism and cheating)
- Attendance
- Grading
- Inclusivity and diversity
- Late adds
- Late assignments
- Repeating courses
- Review of an assigned grade
- Sexualized violence prevention and response
- Students with a disability
- Term assignments and debarment from examinations
- Travel plans
- Waitlists

The following policies are explicitly included because of their importance.

Examinations

Participation for all scheduled examinations is mandatory. Consideration for missed examinations will be given only on the basis of documented illness, accident or family affliction, and for no other reasons. In the event of a missed final examination, students are advised to follow the procedures outlined in the [University Calendar](#).

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. There will be no special accommodation if travel plans conflict with the examination.

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.

Review [What is Plagiarism](#) for the definition of plagiarism. Note: Submitted work may be checked using plagiarism detection software.

Student Code of Conduct

The Humanities, Science, and Social Sciences Faculties have adopted this [Student code of conduct](#). Please, review.

University Policy on Human Rights, Equity and Fairness

The University is committed to promoting, providing and protecting a positive, supportive and safe learning and working environment for all its members.

See [General University Policies](#)

Accessibility & Health Resources

[Centre for Accessible Learning](#)

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, you are free to approach me; however, you must register with the [Centre for Accessible Learning](#) (CAL) for formal arrangements to be made. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

[Health Services](#) - University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives.

[Support Connect](#) - a 24/7 mental health support service for students

- Toll-free (calls from North America): 1-844-773-1427
- International collect calls: 1-250-999-7621

[Counselling Services](#) - Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students.

[Elders' Voices](#) - The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.

Course Experience Survey (CES)

I value your feedback on this course. Towards the end of term you will have the opportunity to complete a confidential course experience survey (CES) 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.

When it is time for you to complete the survey, you will receive an email inviting you to do so. If you do not receive an email invitation, you can go directly to the [CES log-in](#). You will use your UVic NetLink ID to access the survey, which can be completed on your laptop, tablet or mobile device. I will remind you nearer the time, but please be thinking about this important activity, especially the following three questions, during the course.

- What strengths did your **instructor** demonstrate that helped you learn in this course?
- Please provide specific suggestions as to how the **instructor** could have helped you learn more effectively.
- Please provide specific suggestions as to how this **course** could be improved.

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.

Sexualized Violence Prevention & Response

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. Students are encouraged to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Contact svpcoordinator@uvic.ca.



Agreement:

I, _____ (student name), have read the entirety of the course outline and fully understand all course requirements for ECON 245. By signing this document, I agree to all the course policies set out in the syllabus, especially those related to Academic Integrity.

Signature

Once completed, please submit a signed copy of this page only to the Assignments > Syllabus Agreement Dropbox on Brightspace.