



ECON 345 A01

ECON 345 A01 – Applied Econometrics I

Summer Session: 2026 05 – July–August Term

CRN: 31300

Unit Value: 1.5

Course Schedule: Lectures are held Tue-Wed-Fri, 12:30 PM–2:20 PM, from July 6 to August 21, 2026, in MacLaurin Building, Room D115.

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: Amin Kouhbor

Office: BEC 314

Method of contact and availability: Students should contact me by email at mkouhbor@uvic.ca. This is the preferred and only method of communication outside of class. I will respond to legitimate questions and concerns within two business days.

Office Hours: Tuesdays, 2:30–3:30 PM, by appointment. Students should email mkouhbor@uvic.ca to arrange a meeting.

TA Name:

1- Forough Ghadamyari

Office: BEC 308

Email: ghadamyari@uvic.ca

2- Isaac Otoo

Office: BEC 314

Email: isaacotoo@uvic.ca

Teaching and assessment modality statement

This course is face to face and all exams are held in person.

Course Content

This course introduces students to applied econometric analysis, with a focus on multiple regression methods used to study real-world economic questions. Students will learn how to work with data, estimate and interpret regression models, test hypotheses, and evaluate the strengths and limitations of empirical evidence.

The course builds on students' previous training in statistics and economic reasoning and provides a foundation for further study in econometrics, applied economics, and research-based courses such as ECON 346. Students will use R to analyze data, produce visualizations, compare modelling approaches, and communicate results clearly. By the end of the course, students should be better prepared to read, evaluate, and conduct empirical economic analysis in academic, policy, and professional settings.

Course prerequisites/corequisites

Prerequisites: ECON 103 or ECON 103C or ECON 180; ECON 104; ECON 246 or STAT 261; ECON 225 or ENGR 120 or ENGR 240; and MATH 100 or MATH 102 or MATH 109.

Recommended: ECON 203 and ECON 204 prior to ECON 345.

Repeating Courses

Students should be aware of UVic's policy on repeating courses. A student may not attempt a course for a third time without prior approval from the Dean of the Faculty and the Chair of the Department. Students who do not receive approval may be deregistered from the course.

To request permission to attempt ECON 345 for the third time, students must follow the [Repeating Courses instructions on the Economics website](#) and submit the required form to the Department of Economics.

Textbook

The required textbook is *Introductory Econometrics: A Modern Approach* by Jeffrey M. Wooldridge. Students may use the 7th edition or 8th edition, provided they are aware that page numbers, examples, and exercises may differ across editions. The textbook is available for purchase through the UVic Bookstore, and students may also use a bound, loose-leaf, or used copy.

Labs will use R programming language, which is free and open source. An optional open-access resource is *Using R for Introductory Econometrics* by Florian Heiss, available online at: <https://www.urfie.net/>

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

There is no specific minimum grade requirement for ECON 345 listed for the BA or BSc Economics program beyond the normal requirements of the student's program.

Learning Outcomes

By the end of this course, students who successfully complete ECON 345 will be able to explain the basic principles of applied econometric analysis and the role of regression methods in economic research. Students will learn to estimate, interpret, and evaluate multiple regression models using cross-sectional data and introductory time-series applications. They will also be able to identify common econometric issues, such as functional form, binary variables, heteroskedasticity, and endogeneity; conduct hypothesis tests, including t-tests and F-tests; use R to clean, analyze, visualize, and model economic data; and communicate empirical findings clearly in written, numerical, and visual form.

Course Structure, Assessments, and Grading

Statement about learning components

This course is delivered through in-person lectures (not recorded), labs, readings, assignments, exams, and a research project. Lectures introduce the main econometric concepts, methods, and applications, while labs give students hands-on experience using R to analyze data and estimate regression models. Readings and problem sets help students review and practise the material covered in class. Assignments and exams assess students' understanding of econometric theory, interpretation, and application. The research project gives students an opportunity to apply the tools learned in the course to a real economic question, using data, regression analysis, and clear written and visual communication. Course materials, announcements, assignments, and lab information will be posted on Brightspace. Attendance in lectures and labs is strongly encouraged, since material covered in lectures, labs, problem sets, and relevant textbook chapters may appear on exams.

Use of AI

Students may use generative AI tools in this course as a learning aid, but not as a substitute for their own work, analysis, or understanding. AI may be used to help brainstorm ideas, clarify concepts, review R code, improve writing style, or assist with formatting. However, students are responsible for all submitted work, including the accuracy of econometric analysis, interpretation of results, written explanations, code,

tables, and figures.

Students may not submit AI-generated work as their own, rely on AI to complete assignments, labs, exams, or the research project, or use AI in any way that prevents the instructor from assessing the student's own learning. For any submitted work where AI has been used, students must include a brief statement explaining exactly which AI tool was used and how it was used. Failure to disclose AI use, or inappropriate use of AI, may be treated as a violation of UVic's academic integrity policy.

Grading Scheme

The course grade is determined by students' performance on one in-person midterm exam, a final exam, two lab assignments, and a research project. The midterm and final exam assess students' understanding of econometric concepts, regression analysis, interpretation, and application. Lab assignments assess students' ability to apply econometric methods using Excel and R. The research project assesses students' ability to apply the tools learned in the course to a real economic question and communicate results clearly.

Table1- Grading Scheme

Component	Weight
Lab Attendance	5%
Midterm exam	20%
Final exam	40%
Lab Assignment 1	5%
Lab Assignment 2	5%
Research Project Proposal	5%
Research Project Final Report / Presentation	10%
Story telling video (5 minutes video)	10%
Total	100%

Lab Assignments are done and submitted individually. The group research project is designed to give you real-world experience of conducting econometric research. You may choose any topic and dataset to estimate regression models to answer a research question that interests you. Earlier in the term, you will first submit a one-page research proposal (marked only on completeness, not correctness). Then, for the final research project, present your results in the form of a written academic essay (no bullet points, screenshots, or copy-pasted tables/code) presenting your hypothesis, data, methods, and results, with a maximum length of 4 pages plus one page dedicated to title and one for the references. You must also submit your data and R-code that completely replicates your results reported in your final project. If the R-code or data is not submitted, 40% will be deducted from the final project mark.

The research project constitutes independent work - you must reference any literature you cite and any data and methods you use. The consequences of plagiarism range from a failing grade for an assignment or course to disciplinary probation or even expulsion from the university. Review "[What is Plagiarism](#)" for the definition of plagiarism.

Both the proposal and the final project must be submitted individually. No extensions will be granted on the project without formal documented illness or affliction (see policy on late assignments). If the project

is submitted late, 10% will be deducted per day past the due date. If the proposal is submitted late (or not submitted at all), 5% from the final project mark will be deducted per day, up to a maximum of 20% of the project mark. If you do not submit the final research project without documented illness or family affliction, you will receive an “N” for the course.

For the storytelling component, each student must individually create a 5-minute video explaining their project. The video should comprehensively cover all parts of your analysis, showcasing your understanding through the integration of effective visualizations and theoretical knowledge from the course. For a higher grade, focus on clear explanations and engaging relevant models, tests and visuals that highlight key concepts.

Lab Participation (5%): Lab exercises are designed to help students practise econometric modelling using the statistical programming language R. Answers to the short lab exercises must be submitted through Brightspace, or handed in during the lab if permitted, by Friday at 7:00 PM in the relevant week. These submissions, together with the in-class attendance sign-in sheet, will be used to record lab participation. No extensions will be granted for lab exercises without documented illness, accident, or family affliction. Students may miss one lab without penalty.

Mandatory/Essential Course Components

To pass this course, students must complete the research project and attempt both the midterm exam and the final exam. Students must also earn a grade of at least 40% on the final exam. If a student's overall course average is above 50% but both exam grades are below 45%, the final course grade will be capped at 49%.

Dates of Assessments, Due Dates of Assignments

Lab Assignments

Lab Assignment 1 is due on July 29.

Lab Assignment 2 is due on August 18.

Both lab assignments must be submitted through Brightspace by the posted deadline.

Midterm Exam

The midterm exam is scheduled for July 31 and will be held in person. It will cover Chapters 1–3 of the textbook and end-of-chapter questions. Students are required to bring a SHARP EL-510 calculator or one of its permitted variations. Students may also bring one handwritten, one-sided, letter-size help sheet.

Final Exam

The final exam is scheduled for August 21 and will be held in person. It will cover Chapters 3, 4, 5, 6, 7, 8, and 10 of the textbook. Students are required to bring a SHARP EL-510 calculator or one of its permitted variations. Students may also bring one handwritten, one-sided, letter-size help sheet.

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](#). In case you miss the final exam, fill in a [request for a deferral](#). I will not respond to informal requests of academic concessions.

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 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](#)."

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. [Accessibility](#)
- h. [Diversity / EDI](#)
- i. [Equity statement](#)
- j. [Sexualized Violence Prevention and Response](#)
- k. [Discrimination and Harassment Policy](#)

Resources for students

- a. [Student wellness](#)
- b. [Centre for Accessible Learning](#)
- c. [UVic Learn](#). UVic Learn 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. Academic Skills Centre [ASC](#)
- f. Learning Assistance Program ([LAP](#))
- 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

The course schedule below outlines the weekly progression of topics, readings, and major assessment dates. The schedule is tentative and may be adjusted as needed; any changes will be announced on Brightspace.

<i>Date</i>	<i>Week</i>	<i>Weekday</i>	<i>Topic</i>	<i>Chapter</i>	<i>Assessment</i>
07-Jul	1	Tue	Econometrics Introduction	1	
08-Jul	1	Wed	Math and Stat Review1	-	
10-Jul	1	Fri	Math and Stat Review2	-	
14-Jul	2	Tue	Data Preprocessing and Visualization	-	
15-Jul	2	Wed	SLR	2	
17-Jul	2	Fri	SLR	2	
21-Jul	3	Tue	SLR	2	
22-Jul	3	Wed	MLR	3	
24-Jul	3	Fri	MLR	3	
28-Jul	4	Tue	MLR	3	
29-Jul	4	Wed	Statistical Inference	4	<i>Lab Assignment1 due</i>
31-Jul	4	Fri	Midterm	1-3	
04-Aug	5	Tue	Finite-sample and Asymptotic	5	
05-Aug	5	Wed	Further Issues	6	
07-Aug	5	Fri	Further Issues	6	
11-Aug	6	Tue	Dummy Variables I	7	
12-Aug	6	Wed	Dummy Variables II	7	
14-Aug	6	Fri	Heteroskedasticity 1	8	
18-Aug	7	Tue	Heteroskedasticity 2	8	<i>Lab Assignment2 due</i>
19-Aug	7	Wed	Time Series - Introduction	10	
21-Aug	7	Fri	Final Exam	3-10	<i>Story telling & Final report deadline</i>

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

Students are encouraged to bring a laptop to labs for work with R and RStudio. Electronic devices may be used during lectures and labs for course-related purposes only. During exams, only a non-programmable SHARP EL-510 calculator, i.e. one of its many variations is permitted. Other electronic devices must be turned off and stored away.

Educational Technology involving storage outside Canada

No educational technology that stores or accesses students' personal information outside Canada is required for this course. If this changes, students will be informed in advance, and reasonable alternatives will be discussed where appropriate.