



ECON 365 A01
ECONOMETRICS: PART I
CRN 11186 (Lectures), 11187 and 11188 (Labs)

Winter Session: 2022 09 – First Term

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Office Hours: Mondays 12.30 - 1.30pm, Thursdays 12.30 – 1.30pm (times may vary, notice will be given)

UVic 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

Econometrics is the science (and art!) of combining economic theory, statistical and computing techniques to analyze economic data. What distinguishes econometrics from statistics is the attention to the failure of many standard assumptions, which arises from the nature of economic relationships and the lack of controlled experimentation.

This is the first course in the ECON365/366 sequence. The aim of both ECON365 and ECON366 is to provide you with a solid background for undertaking basic empirical research, as well as preparing you for more advanced courses at the undergraduate and graduate levels. The focus of ECON365 will be on the classical linear regression model. We will consider how to choose estimation rules consistent with the model under study, and focus on sampling properties of estimators, on the computer implementation of the techniques to obtain results from empirical applications, and on examining the validity of the assumptions we make.

In addition to traditional lectures, 'learning-by-doing' is vital to develop your understanding of econometrics. To assist you, there are weekly laboratory classes, in-class worksheets, practice exercises, in-class random, short quizzes, along with assignments and the usual formal mid-term tests and final examination. All of these will allow you to gauge your understanding of the material. Keeping up with material through regular weekly work is key to succeeding in this course.

The course material for this sequence of courses is theoretical in nature and we will use matrix algebra extensively. Therefore, a strong background in matrix algebra is necessary for this course.

Prerequisites: These are available [here](#). I will be assuming that all students registered in the course have the prerequisites and that anyone who remains in the course without the prerequisites does so at their own risk.

Lectures

Mondays and Thursdays, 2:30 to 3:50pm, in Cornett Building, A125.

Slides by key topics will be available from Brightspace ahead of the lectures, I will be elaborating on those in class. Also, there will be occasional random in-class quizzes to help you engage with the course material. Naturally, in-person class attendance is very important for success in this course.

Laboratory/Tutorial Classes

These will be held **weekly** on Fridays 12:30 to 1:20pm or 1:30 to 2:20pm in BEC170 for labs or Clearihue A239 for tutorials, depending on the material to be covered. Exercises for each laboratory/tutorial class will be posted on Brightspace –exercise sheets will contain information on which room to go for the class for that week. We will be using the EViews econometrics package throughout this course, but the labs will also offer you a chance to get some familiarity with the R language and environment for statistical computing and graphics. If time permits, you will also be introduced to Stata.

These classes will cover formal class material and will run all through the term, starting the first week of term (September 6th). Sara Enns will be leading these classes; I will also occasionally teach labs/classes. The goal of the lab sessions is primarily to assist you to figure out how to implement the techniques learnt during lectures in empirical applications. The implementation process undertaken in the labs should also help you understand better the material learnt during lectures. In addition, the lab/tutorial material should help you prepare better for the empirical questions in assignments, mid-term tests and final examination. Therefore, it is highly important that you attend these sessions.

Textbooks

Several alternatives are possible. To cover the whole ECON365-366 sequence, we recommend:

- Greene, W., 2020, *Econometric Analysis*, 8th edition, Pearson (past editions are fine). [Chapters 1-6, 14, 20-21 plus appendices A-D for ECON365]

or

- Hansen, B. E., 2021, *Econometrics*, Princeton University Press. [Ch. 1-9, 11, 14-16]

The above textbooks make use of matrix notation throughout. Alternatively, you can also resort to:

- Wooldridge, J., 2020, *Introductory Econometrics: a Modern Approach*, Cengage (the latest edition is the 7th, past editions are fine). [Ch. 1-7, 9-12]
- Vogelvang, B., 2005, *Econometrics: Theory and Applications with EViews*, Pearson: Harlow. [Ch. 1-7, 12-14]
- Maddala, G.S., 1992, *Introduction to Econometrics*, 2nd Edition, New York: Macmillan. [Ch. 1-4, 7-8, 13-14, 16]
- Stock, J.H. and M.W. Watson, 2020, *Introduction to Econometrics*, 4th Edition, Pearson (past editions are fine). [Ch. 1-7, 14-18]

These textbooks use mainly summation notation but contain chapters where the transition to matrix notation is worked out. I indicate in [.] the chapters that are likely to be covered in ECON365 - in some cases, not all material from certain chapters will be covered, I will indicate more precise details in the corresponding slides.

Course Outline:

- Review of Probability, Statistics and Matrix Algebra
- Linear regression model and least squares estimation
- Hypothesis testing
- Asymptotics of OLS
- Maximum Likelihood Estimation (if time permits)
- Regression Analysis with Time Series Data (if time permits)

Brightspace

- Brightspace will be used extensively for the course. All students are expected to be able to navigate this system.
- The lecture notes, assignments, practice exercises, sample tests, solutions etc. will be posted in Brightspace. Please note that slides are not lecture notes and they do not substitute recommended reading - they are only outlines of the actual lectures. It is very important to attend lectures and do the required readings.

E-mail correspondence

I receive in excess of one hundred emails every day, please make sure you follow these rules so that your email gets the appropriate attention. Use only my personal email vgabriel@uvic.ca. Emails should be limited to critical matters, such as inability to attend 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 (see [here](#) for a gentle guide on how to email faculty).

Office hours

The default is in-person office hours (BEC361), although a chat or video call via MS Teams can also work – typically slots of 10-15 minutes. If you have questions about the course topics, please prepare beforehand by revising the material and doing the required readings. If the times of the office hours do not work for you, please send me an email (see rules above) and I will try to find alternative slots

List Minimum Grade Requirements for Certain Courses

ECON 365 with a minimum grade of B is strongly recommended prior to ECON 366.

Grading

IN-CLASS QUIZZES: 10%. There will be at least four in-class quizzes that will be randomly undertaken during class. These are to encourage active learning and to offer opportunities to engage with the course material as well as for you (and me) to assess your understanding. Having difficulty completing a quiz is a signal for you to work on the related material.

ASSIGNMENTS (2): 30%. The assignments will provide you further opportunities to engage with the course material. They will also help you understand the material better as you try to apply the knowledge obtained from lectures/labs/textbook to specific contexts. Finally, the assignments are designed to prepare you for the examinations.

Notes:

- Precise dates for assignments will be confirmed in due time (one in October, one in November).
- You will have one week to complete each assignment.
- While I encourage group learning, the solutions to the assignments, including the computer outputs, you submit **must be** your own independent work; please use your own words to answer the assignments to avoid plagiarism.
- Submission of assignments will be via Brightspace (instructions to follow).
- No late assignment will be accepted. If you miss an assignment due to medical reasons, and can provide me with an appropriate medical certificate, the weight of the uncompleted assignment will then be reassigned equally to the other assignments.

TERM TESTS (2): 30%. These will be 45-min each in-lab computer tests (precise dates to be confirmed, one late October, one late November). They will contain a combination of multiple choice, fill-in-the-blank questions and empirical exercises to be carried out using EViews.

FINAL EXAMINATION: 30%. The final exam will be comprehensive and it will be a 3-hour exam. Time and venue will be decided by Examinations branch, dates usually posted late October. The interpretation of the grades given in the table below should be helpful for the latter.

Note: For the Term Tests and the Final Examination you will be allowed to bring a “formula sheet” (handwritten or typed on **both sides** of **one** 8 1/2 x 11 inch sheet of paper) with **formulae only**. If your formula sheet has other information besides formulae, it will be taken away. Details regarding examinable material and the format of the test/exam will be provided in class closer to time.

LETTER GRADES: All assessment in this course will be assigned a numerical score. Each will then be appropriately weighted to give a total score for the course out of a possible 100%. The following will be used.

Grading Scale:

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](#).

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

Attendance 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.

Learning Outcomes

This course will provide you with opportunities to acquire intellectual, academic and practical skills in:

- Inquiry, analysis, and problem solving
- Critical thinking
- Numerical literacy
- Critical evaluation of quantitative information
- Systematically understand the principles of estimation and hypothesis testing in a multivariate setting
- Demonstrate a practical understanding of the application of econometric techniques to actual data using appropriate software

Please note that many of these learning outcomes overlap with the [University's general Learning Outcomes](#).

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.