UVic Land Acknowledgement

We acknowledge and respect the lək̓ʷəŋən peoples on whose traditional territory the university 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 and time series methods. 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, 11:30 to 12:50pm, in David Strong Building, C118.

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 Wednesdays 3:30 to 4:20pm or 4:30 to 5:20pm in BEC170/BECLab for labs or Clearihue A127/A312 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 several econometrics packages throughout this course, namely EViews and R - if time permits, you will also be introduced to Stata and Matlab.

These classes will cover formal class material and will run all through the term, starting the second week of term (September 13th). Rouzbeh Parsi will be leading these classes; I will also occasionally teach labs/classes and Rouzbeh may step in and teach the odd lecture.

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:


or


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. 1-12, 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)
- Time Series Analysis

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 (BEC360), although a chat or video call via Zoom or 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**

The final grade is determined as follows:

**IN-CLASS QUIZZES: 10%**. There will be at least five 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.

**ASSIGNMENT (1): 40% (mandatory)**. The assignment will provide you further opportunities to engage with the course material and the use of econometric packages. It 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 assignment is designed to prepare you for the final examination. A first should be submitted in November for formative feedforward, final submission in December.

**Notes:**
- Precise submission dates for assignments will be confirmed in due time
- You are encouraged to share ideas and discuss your work amongst classmates. However, your submission 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).

**MIDTERM TEST (1): 20% (mandatory)**. This will be a 45-min in-lab computer test (precise date to be confirmed, most likely early November). It will contain a combination of multiple choice, fill-in-the-blank questions and empirical exercises to be carried out using econometric packages.

**FINAL EXAMINATION: 30% (mandatory)**. 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 Midterm Test and the Final Examination you will be allowed to bring a “formula sheet” (hand-written 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:

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<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A+</td>
<td>90-100</td>
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<tr>
<td>A</td>
<td>85-89</td>
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<tr>
<td>A-</td>
<td>80-84</td>
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<tr>
<td>B+</td>
<td>77-79</td>
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<tr>
<td>B</td>
<td>73-76</td>
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<tr>
<td>B-</td>
<td>70-72</td>
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<tr>
<td>C+</td>
<td>65-69</td>
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<tr>
<td>C</td>
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<tr>
<td>D</td>
<td>50-59</td>
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<td>F or N</td>
<td>0-49</td>
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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 at 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 for 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. The University reserves the right to use a plagiarism software to detect violations of academic integrity (including unauthorized use of ChatGPT and other Artificial Intelligence).
**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**
The University of Victoria offers a number of resources to support international students as they pursue their studies. UVic's International Centre for Students is the primary office supporting international students on campus at the university-wide level and provides various supportive program through the UVic Global Community Initiative, including a Mentorship Program and Conversation Partner Program. For academic advising-related questions, students in the Economics Department are also encouraged to meet with the Economics Undergraduate Advisor (Prof. Kenneth Stewart, ecadvice@uvic.ca) as well as an academic advisor in the Academic Advising Centre early in their studies to help map out a plan to declare a major and complete university program requirements. Other resources include the Centre for Academic Communication and the Math and Stats Assistance Centre. The International Student Liason in the Economics Department is Prof. Paul Schure who can help you connect with other international and domestic students in the Department. His email address is schure@uvic.ca. Please, reach out if you are interested.

**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**
Understand the underlying statistical foundations of econometrics; be able to critically assess published econometric results; be able to formulate, estimate and interpret an econometric model; be able to write up the results of a study of an economic problem that includes econometric analysis; be proficient in using the time series testing and estimation capabilities of different econometric packages.

**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](http://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](mailto:svpcoordinator@uvic.ca).