Course Content

Economics 246 is the second building block of statistical analysis. Economics 245: Descriptive Statistics, introduced elementary descriptive statistics (i.e. mean, median, mode, variance, percentiles, etc.), techniques to analyze raw data (i.e. R, Excel, EViews applications) and basic probability theory (cumulative density functions, probability density functions, integration, etc.). Economics 246 launches into statistical inference.

This course introduces the statistical tools necessary to legitimately analyze and interpret data, with emphasis on economic data and economic applications. Readily available personal computers have created an atmosphere where misuse and misinterpretation of data is commonplace. Hence, a proper knowledge and understanding of statistical concepts is crucial in order to avoid inferential mistakes and inaccurate forecasts. At the conclusion of this course, you will have achieved: 1) the skills necessary to critically assess statistical results and 2) the development of a certain level of skepticism regarding commonly published economic theories and statements.

Economics 246 is presented in two components. In the first half of the course, we will focus on using sample measures to infer something about the characteristics of a population. Using sample data, we undertake the task of estimating (quantitative) statements made about the population. Through proper testing techniques, we can validate these statements.
In the second half of the course, we apply our inferential techniques to the linear regression model. This model allows us to statistically examine relationships between economic variables. We can then use the estimated regression relationship as a tool to quantitatively test economic theories. This is known as econometrics. Hence, practical questions about economic phenomena can be answered in a systematic, legitimate and appropriate manner.

Grading

To pass this course a student must complete all exams with a minimum of 40% each. Provided you satisfy this requirement, your final grade is computed as follows.

<table>
<thead>
<tr>
<th>Item</th>
<th>Weight in grade calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments (3)</td>
<td>15%</td>
</tr>
<tr>
<td>Webassign Problems</td>
<td>0% (20 percent)</td>
</tr>
<tr>
<td>2 midterms (Oct 16\textsuperscript{th} and Nov 20\textsuperscript{th})</td>
<td>40% (20 percent if assignments are submitted)</td>
</tr>
<tr>
<td>Labs</td>
<td>10 Percent</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
</tr>
</tbody>
</table>

To pass this course you must satisfy the following requirements:

1. You complete the following mandatory course components: (i) Attended at least 7 of the 10 mandatory lab sessions in full. (ii) Submit all assignments on Brightspace, and (iii) attempted all Midterm exams.
2. You obtain a minimum score of 40 percent on each exam and the final exam.

Failure to complete these mandatory course requirements will result in a grade of “N” regardless of the cumulative percentage on the course. N is a failing grade and factors into your GPA calculation as a value of 0. Provided you satisfy the above requirements, your final grade is computed as above.

Minimum Grade Requirements for Certain Courses
You must get a C+ in ECON 245 if you would like to take ECON 345.

LABORATORY CLASSES:

Laboratory classes are scheduled for this course. You need to register in a Laboratory section. The Laboratory sessions cover formal classwork, with an instructor present and they run all term. No labs until the third week of term. (September 18\textsuperscript{th}).

<table>
<thead>
<tr>
<th>Lab Section</th>
<th>Day</th>
<th>CRN#</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>B01</td>
<td>Monday</td>
<td>11159</td>
<td>2:30 pm</td>
<td>CLE A108</td>
</tr>
<tr>
<td>B02</td>
<td>Monday</td>
<td>11160</td>
<td>3:30 pm</td>
<td>CLE A108</td>
</tr>
</tbody>
</table>
**Midterm(s):** The midterm exams are scheduled for October 16th and November 20th at 8:30 a.m. in class.

**Textbook & Webassign (optional)**

**Statistics for Business and Economics 15th edition**

Jeffrey D. Camm, James J. Cochran, Michael J. Fry, Jeffrey W. Ohlmann, David R. Anderson, Dennis J. Sweeney, Thomas A. Williams

Publisher: Cengage Learning

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**Instructor** | **Section Name** | **Class Key**  
--- | --- | ---  
Betty Johnson | Economics 246, section A01 | uvic.bc 2851 2818  

**Student Enrollment Instructions:**

- [Enroll with a Course Key](#)
- [Enroll with a Course Key (Inclusive Access)](#)

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**Textbook (optional)**

1) [WebAssign Student Registration Video](#)
2) **Student Tech Support info:** [Create a ticket here](#) (when you submit a ticket you will be provided with a case number and the customer support phone number)

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**Assignment(s) on Webassign:**

There are four online assignments. Assignments will be posted well ahead of the due date and will close at midnight PST on the due date. Make sure you have set up your account before you start the assignment.
## Course Schedule

<table>
<thead>
<tr>
<th>Topic</th>
<th>Chapter</th>
<th>Week</th>
<th>Due Dates and Exam Information</th>
</tr>
</thead>
</table>
| Topic 1: Sampling and Sampling Distributions; Sampling continued Statistics; standard normal, t-dist, chi-square dist. | 7, 22 | 1-3 | Assignment #1 due September 23rd @ midnight  
WebAssign #1 Sept 29 |
| Topic 2: Estimator Properties (7.7) Interval Estimation | 7.7, 8 | 4-7 | Assignment #2 Due October 29 @ 11:59pm  
WebAssign #2 October 20  
Midterm #1 October 16th |
| Topic 3: Hypothesis Testing Hypothesis Testing with two samples | 9, 10, 11 | 8-11 | WebAssign #3 Due November 10th  
Assignment #3 due November 25th |
| Topic 4: Regression and Correlation Analysis | 14 | 12-13 | Midterm #2 November 20th  
WebAssign #4 due December 1st @ midnight |

### E-mail correspondence/how to communicate with the instructor:

**E-mail correspondence**

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. 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.

**Office hours:** The University of Victoria has a site licence for Zoom conferencing. I will set a Scheduled Zoom meeting once a week.

**Join Zoom Meeting**

https://uvic.zoom.us/j/85954196275?pwd=T0xCN2NQcTlzL0xRNW51QzlucHJjUT09

**BrightSpaces**

- BrightSpaces is used as a means of delivering information for the course. All students are expected to be fully functional with the system. Your grades will be posted on Brightspaces.
All announcements will be posted in BrightSpaces. Students are advised to check regularly for updates.

**Important Dates**

**Winter session - first term**

- **September 2023**
  - University Closed (Labour Day)
    - Monday, September 4th
  - First year registration and opening assembly for Faculty of Law
    - Tuesday, September 5th
  - First term classes begin for all faculties
    - Wednesday, September 6th
  - Last day for adding or dropping courses in the Faculty of Law
    - Thursday, September 14th
  - Last day for 100% reduction of tuition fees for standard first term and full year courses
    - Tuesday, September 19th
    - 50% of tuition fees will be assessed for courses dropped after this date. For non-standard courses see [undergraduate](#) and [graduate](#) course add and drop dates.
  - Last day for graduate students to register in a personal leave in first term
    - Friday, September 22nd
  - Last day for adding courses that begin in the first term
    - Friday, September 22nd
  - Last day for paying first term fees without penalty
    - Saturday, September 30th
<table>
<thead>
<tr>
<th>Month</th>
<th>Event Description</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>October 2023</td>
<td>University Closed (National Day for Truth and Reconciliation, September 30th)</td>
<td>Monday, October 2nd</td>
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<tr>
<td></td>
<td>Senate meets</td>
<td>Friday, October 6th</td>
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<td></td>
<td>University Closed (Thanksgiving Day)</td>
<td>Monday, October 9th</td>
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<tr>
<td></td>
<td>Last day for 50% reduction of tuition fees for standard courses</td>
<td>Tuesday, October 10th</td>
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<tr>
<td></td>
<td>100% of tuition fees will be assessed for courses dropped after this date.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For non-standard courses see <a href="#">undergraduate</a> and <a href="#">graduate</a> course add and drop dates.</td>
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<td></td>
<td>Senate Committee on Academic Standards meets to approve Convocation lists</td>
<td>Wednesday, October 18th</td>
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<tr>
<td></td>
<td>Last day for withdrawing from first term courses without penalty of failure</td>
<td>Tuesday, October 31st</td>
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<tr>
<td>November 2023</td>
<td>Senate meets</td>
<td>Friday, November 3rd</td>
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<tr>
<td></td>
<td>University Closed (Remembrance Day, Nov 11th)</td>
<td>Monday, November 13th</td>
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<td></td>
<td>Reading Break for all faculties</td>
<td>Monday, November 13th - Wednesday, November 15th</td>
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<td></td>
<td>Fall Convocation</td>
<td>Tuesday, November 14th and Wednesday, Nov 15th</td>
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<tr>
<td></td>
<td>Faculty of Graduate Studies deadline to apply to graduate for Spring Convocation</td>
<td>Wednesday, November 15th</td>
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<tr>
<td></td>
<td>Students completing in the Fall term only</td>
<td></td>
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</tbody>
</table>
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**
*For missed midterm exams, please contact me as soon as possible by email. A make-up exam date and time will be provided the following week.*

**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 Liaison 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.

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.

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.

According to the University of Victoria Calendar [http://web.uvic.ca/calendar](http://web.uvic.ca/calendar)

“A student may not attempt a course a third time without the prior approval of the Dean of the Faculty and the Chair of the Department in which the course is offered unless the calendar course entry states that the course may be repeated for additional credit. A student who has not received this approval may be deregistered from the course at any point and may be asked to withdraw from his or her declared or intended program.”

In order to request permission to attempt this course for the third time, you must follow the instructions provided under the link Repeating Courses at [http://www.uvic.ca/socialsciences/economics/undergraduate/home/course%20policies/index.php](http://www.uvic.ca/socialsciences/economics/undergraduate/home/course%20policies/index.php)

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

Explicitly list the Mandatory Course Components of the course.

To pass this course you **must satisfy** the following requirements:

1. You complete the following mandatory course components: (i) Attended at least 7 of the 10 mandatory lab sessions in full. (ii) Submit all assignments on Brightspace), and (iii) attempted all Midterm exams.
2. You obtain a minimum score of 40 percent on each exam and the final exam.

**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.
Learning Outcomes

Economics 246 is the second of a series of courses dealing with statistics and econometrics. At the end of the course students should:
- Understand how to appropriately deal with describing and analyzing basic data sets using economic data.
- Perform simple hypothesis testing and probability.
- Standard normal distribution, t-distribution, Chi-square distribution, F-distribution.
- Deal with sample data effectively.
- Estimation procedures.
- OLS regression and correlation analysis.
- Enhance their personal understanding of Canadian data collection agencies.