Carleton University
Department of Economics

ECON 2210 G
Statistical Methods in Economics and Business I
2018 WINTER
Instructor: Valerie Rochester

Classes: Tuesdays & Thursdays, 10:05–11:25
Tutorials: Thursdays, 16:05 – 17:25

Office: B-840 Loeb
Office Hours: Tuesday 11:45-13:00
E-mail: valerie.rochester@carleton.ca
Please use the cuLearn e-mail facility for all course-related electronic communication.
TA: TBA

Phone: 613-520-2600 ext. 3769 (no voice mail)

Calendar Description
Basic statistical methods for the study of economics. Topics include descriptive statistics, elementary probability theory, sampling distributions, estimation and hypothesis testing for one and two population parameters.
Precludes additional credit for BIT 2000, BIT 2100 (no longer offered), BIT 2300 (no longer offered), ECON 2200 (no longer offered), ECON 2201 (no longer offered), STAT 2507, STAT 2606, and STAT 3502.
Prerequisite(s): ECON 1401 (or equivalent) with a grade of C- or higher; ECON 1402 (or equivalent), which may be taken concurrently with ECON 2210.
*A grade of C- or higher is required to qualify for ECON 2220 and 3706; a grade of C+ or higher is required to qualify for ECON 3900, 3920, 4002, and 4706.


Course Outline
I: Descriptive Statistics and Basic Probability
   Chapter 1: The Where, Why, and How of Data Collection
   Chapter 2: Graphs, Charts, and Tables-Describing Your Data
   Chapter 3: Describing Data Using Numerical Measures
   Chapter 4: Using Probability and Probability Distributions
II: Important Probability Distributions
   Chapter 5: Discrete Probability Distributions (except for the discussion of the Hypergeometric Distribution in Section 5.3)
   Chapter 6: Introduction to Continuous Probability Distributions
III: Statistical Inferences Based on Single Samples
   Chapter 7: Introduction to Sampling Distributions - Sections 7.1 and 7.2 only
   Chapter 8: Estimating Single Population Parameters - Sections 8.1 and 8.2 only
   Chapter 9: Introduction to Hypothesis Testing - Sections 9.1 and 9.3 only
   Chapter 10: Estimation and Hypothesis Testing for Two Population Parameters - Sections 10.1, 10.2, and 10.3 only
   Chapter 11: Hypothesis Testing for One and Two Population Variances - Section 11.1 only (and only this if time permits)
**Data Analysis and Microsoft Excel**

The students are assumed to be able to use and access to Excel at home, school, or work. Some problems in the final assignment will allow the students to have the opportunity to apply chapter techniques to and use a computer to solve the problems.

**All relevant materials such as notes, slides, practice assignments, and solutions will be posted to cuLearn.** "All materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author."

**NOTE:**
For verification and security purposes, I will not reply to emails originating from non-Carleton e-mail accounts, and which are not signed with a student’s name and student number. Assignments and changes to schedules will be made available on cuLearn only. Please ensure that you have a Carleton email account.

**Tutorials**

Tutorials will be held prior to each class beginning on January 11. During these tutorials additional examples and problems related to the current topic will be presented and solved. In addition any questions on the material may be raised.

**Course Evaluation**

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<thead>
<tr>
<th>Test Type</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Two 80-minute in class tests worth 20% each</td>
<td>40%</td>
</tr>
<tr>
<td>One hand-in assignment</td>
<td>15%</td>
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<tr>
<td>Final Examination – 3 hours (to be scheduled</td>
<td>45%</td>
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<td>by the University)</td>
<td></td>
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<td></td>
<td>100%</td>
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****IMPORTANT EVALUATION CRITERION PLEASE READ CAREFULLY****

Tests will be held in class and will last 80 minutes. **There are no deferred tests.** For students who can document a compelling reason for missing a test within one week of the missed test, the assigned weight of 20% will be added to the weight of the final exam; otherwise a mark of zero is assigned. Only ONE test will be treated in this way as the maximum weight of the final exam will be 65%.

A maximum weight of 65% will be given to the final examination in the event that a test is missed and valid documentation is provided.

No course grades are final until approved by the Faculty Dean. Note also that course grades may be scaled upwards or downwards in a rank-preserving manner to better fit the relevant departmental distributional norm. Application to write a deferred final examination must be made at the Registrar’s Office.

Students must fulfil all of the preceding course requirements in order to achieve a passing grade (D- or higher).

The final date to register in this course is January 19, 2018. The final date to withdraw from this course with a fee adjustment is January 31, 2018. The final date to withdraw from this course without academic penalty is April 11, 2018.
Two Tests (Total 40%)

The following references are expected to hold, however if for any reason a topic is not completed prior to the test, you will be informed through cuLearn of the change and you will be responsible ONLY for what has been covered in class.

TEST 1: Tuesday, February 6 – Chapters 1-5
TEST 2: Tuesday, March 20 – Topics 6-9

Practice questions and solutions are posted on cuLearn before each test, and reflect the type of questions you can expect. Study groups are useful to discuss solutions.

Assignment (15%) – due in class by 11:25 Tuesday, April 10, 2018 OR EARLIER

**NO LATE ASSIGNMENTS WILL BE ACCEPTED**

The assignment will be posted on cuLearn, will cover all the course material, and is due in class on Tuesday, April 10, 2018 or earlier. The assignment may be submitted to me before the final class. Failure to submit this assignment results in an FND in the course. Please keep a copy of your assignment, as your graded assignment may not be available for pick-up prior to the final examination. Students may wish to work together on assignments, but each student must submit his/her assignment independently.

Final Examination (45%)

The final exam covers the entirety of the course material – Chapters 1-11 (if all material is covered), lasts 3 hours, and will be scheduled by the University to take place during the official final examination period. Failure to write the final examination results in a grade of ABS (provided you have met the conditions described in the EVALUATION CRITERION above). In order to write a deferred final exam, students must contact the Registrar’s Office.

Course Standing

Standing in a course is determined by the course instructor subject to the approval of the Department Chair and the Faculty Dean. This means that course grades may be scaled upwards or downwards in a rank-preserving manner to better fit the relevant departmental distributional norm. No grades are final until they have been approved by the Dean.

Plagiarism

Please be aware that plagiarism is a serious offense and one that should be recognized and avoided. Please see “Pammett on Plagiarism and Paraphrasing” at www.carleton.ca/economics/courses/writing-preliminaries.

Academic Accommodation

For Students with Disabilities:

Students with disabilities requiring academic accommodations are encouraged to contact a coordinator at the Paul Menton Centre for Students with Disabilities (ext. 6608) to complete the necessary letters of accommodation. After registering with the Centre, please set up an appointment with me to discuss your needs at least two weeks prior to a test or in-class mid-term exam. This is necessary in order to ensure sufficient time to make the necessary arrangements.
For Religious Observance:

Students requesting academic accommodation on the basis of religious observance should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before the compulsory academic event. Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student.

Students who have questions or want to confirm accommodation eligibility of a religious event or practice may refer to the Equity Services website for a list of holy days and Carleton’s Academic Accommodation policies, or may contact an Equity Services Advisor in the Equity Services Department for assistance.

For Pregnancy:

Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete a letter of accommodation. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.