Intermediate Econometrics 1  
Economics 2222A-001/002  
Department of Economics  
Western University  
September 2014

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Office hours: T 11am-12pm, TH 1-2pm, or by appointment  
Undergraduate enquiries: (519) 661-3507, SSC 4075, or econugrd@uwo.ca

Class times and locations
Section 001 T: 9:30-10:30 am; TH: 9:30-11:30 am in SEB 2100
Section 002 T: 3:30-4:30 pm; TH: 2:30-4:30 pm in WL 258

Registration
You are responsible for ensuring you are registered in the correct courses. If you are not registered in this course, the Department will not release your marks until your registration is corrected. You may check your timetable by using the Login on the Student Services website at https://studentservices.uwo.ca/secure/index.cfm. If you notice a problem, please contact your faculty academic counsellor right away.

Prerequisite note
The prerequisites for this course are Economics 1021A/B and 1022A/B, or Economics 1020 or 2001A/B; and Calculus 1000A/B (with a mark no less than 60%) or Calculus 1100A/B (with a mark no less than 60%). You are responsible for ensuring that you have successfully completed all course requisites, and that you have not taken an anti-requisite course. Lack of prerequisites may not be used as a basis for appeal. If you are found to be ineligible for a course, you may be removed from it at any time and you will receive no adjustment to your fees. This decision cannot be appealed. If you find that you do not have the course prerequisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only help protect your academic record, but will ensure that spaces become available for students who require the course in question for graduation.
Course overview
This is an introductory course in probability and statistics. Probability provides the foundation for statistics, which is what economists use to learn about the real world. We will start with basic ways of summarizing data, move on to theoretical tools to help us model and understand the data, and finally learn how to make inferences about the real world based on data and our new-found theoretical underpinnings.

It will be important that you get the theoretical background in lectures and practice the theoretical and applied questions in the homeworks, which will be graded to incentivize their completion. It is vital to your understanding of the material to at least attempt to solve homework problems.

Learning outcomes
After this course, students should be able to: form and evaluate probability statements, be able to work with conditional probabilities and apply Bayes rule, derive sampling distributions for discrete or continuous random variables, compute a point estimate for a population parameter, compute a confidence interval for the population mean of a discrete or continuous random variable, formulate a hypothesis test, test for a difference in means for discrete or continuous random variables, and understand the basics underlying a one-variable linear regression model.

Course text

There are several textbook options available to you:

1. NCT8 is available at the bookstore.
2. An ebook for NCT8 is also available at the bookstore (you may need internet access or an app to use this offline).
4. There are several copies of NCT8 on reserve at the Weldon Library.
5. The Seventh edition (NCT7), which you may be able to find used for a cheaper price, is a close substitute for the Eighth edition textbook.

I will indicate which sections of NCT7 and NCT8 correspond to material in lectures. New bookstore purchases of either the physical copy or ebook version of NCT8 include MyStatLab, a web program containing review materials and practice problems related to the textbook course. Some students may find the extra practice helpful, though the homeworks I assign more accurately reflect the difficulty level in this course. You can access MyStatLab at http://www.pearsonmylabandmastering.com/; the course ID is mehta12287.

If you are on the fence, you can use MyStatLab for two weeks for free (look for the prompt when signing up online).

Course outline
This is a tentative outline of our course, with book chapter references in parentheses (NCT7 and NCT8 use the same chapter numberings). The outline may be adjusted based on our progress. Note that material in lectures may not be in the textbook but may still appear on exams.

1. Foundations
   (a) Descriptive statistics (NCT 1-2)
   (b) Probability theory (NCT 3)

2. Probability distributions
   (a) Discrete random variables and probability distributions (NCT 4)
   (b) Continuous random variables and probability distributions (NCT 5)
   (c) Random sampling and sampling distributions (NCT 6)

3. Inferential statistics
   (a) Point estimation (NCT 7)
   (b) Confidence intervals (NCT 7-8)
   (c) Hypothesis testing (NCT 9-10)

4. Linear regression (NCT 11)
Grading
There are graded homeworks, midterms, and a final exam.

Homeworks: There are 3 graded homeworks, each of which will cover recent material. Homeworks will be posted on the course website one week before their due dates, which are October 1, October 29, and November 26 (tentatively). Late homeworks are forfeited; a homework assignment is considered late if it has not been physically turned in either to me or the box outside my office by 5pm on the day it is due. The lowest homework score is dropped.

Midterm 1: 2-hour exam held outside of class. Wednesday, October 8, from 7-9pm (tentatively). The location will be announced in class.

Midterm 2: 2-hour exam held outside of class. Wednesday, November 5, from 7-9pm (tentatively). The location will be announced in class.

Final exam: This exam will be 2.5 hours. The date and time will be set later this semester by the Registrar’s office.

The course grade is computed using the following weights:

- Homework: 10%
- Midterm 1: 25%
- Midterm 2: 25%
- Final exam: 40%

All exams are cumulative. There will be no make-up mid-term exams. Let me know as soon as possible if you have a class conflict with one of the midterms. If a student misses a mid-term due to sickness or other acceptable excuse the student must present an official document justifying the absence and the weight of that exam will be added to the one of the final exam. In case of lack of justification for the absence, a grade of zero will be attributed to that exam.

The following re-weighting rule applies to all students who have taken all three exams. If the final exam grade is higher than the lower midterm grade, the weight of the lower midterm will be reduced to 15%, while the final exam weight will be increased to 50% (all other weights remain the same). The re-weighting rule provides a way to improve your overall grade if you perform better on the final. This re-weighting rule does not apply to students who miss an exam.

You may submit an exam or homework for a regrade within one week of when it has been handed back in class but note that I may scrutinize the entire exam or homework during the regrade. This means your grade may go up, go down, or stay the same.

Electronic Devices
The only electronic device you may use during exams is a non-graphing, non-programmable calculator. Graphing/programmable calculators, cell phones, etc. must be kept in your bag. If you have any of these devices out during an exam it will be taken from you and will only be returned once you have turned-in the exam.

Important dates

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<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>9/4</td>
<td>1st day of class</td>
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<tr>
<td>10/1</td>
<td>(tentatively) Homework 1 due</td>
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<td>10/8</td>
<td>(tentatively) Midterm 1 (WEDNESDAY, 7-9pm, location TBA)</td>
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<tr>
<td>10/29</td>
<td>(tentatively) Homework 2 due</td>
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<td>11/5</td>
<td>Drop day</td>
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<td>11/5</td>
<td>(tentatively) Midterm 2 (WEDNESDAY, 7-9pm, location TBA)</td>
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<td>11/26</td>
<td>(tentatively) Homework 3 due</td>
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<td>12/2</td>
<td>Last day of class</td>
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<td>12/6 - 12/17</td>
<td>Final exam period, exam date TBA</td>
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Statement on Mental Health: If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit [http://www.uwo.ca/uwcom/mentalhealth](http://www.uwo.ca/uwcom/mentalhealth) for more information on these resources and on mental health.
Please Note
Department Policies for 2014 – 2015

Remember that the University expects all students to take responsibility for their own academic Programs. Also remember to check your registration to make sure you are enrolled in the correct courses.

1. Guidelines and policies for the Faculty of Social Science and the Department of Economics are posted online in the current Western Academic Calendar at http://westerncalendar.uwo.ca.


3. **Cheating as an academic offence:** Students are responsible for understanding what it means to “cheat”. The Department of Economics treats cheating incidents very seriously and will investigate any suspect behavior. Students found guilty will incur penalties that could include a failing grade or being barred from future registration in other economics courses or programs. The University may impose further penalties such as a notation on your official academic transcript, suspension or expulsion.

4. **Plagiarism:** Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge it by using quotation marks where appropriate and referencing with footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the current UWO Academic Calendar at http://westerncalendar.uwo.ca/2014/pg113.html).

   The University of Western Ontario uses software to check for plagiarism and students may be required to submit their written work in electronic form. Those found guilty will have penalties imposed as noted in point 3.

5. It is Department of Economics policy that **NO** assignments be dated, stamped or accepted by staff. Students are responsible for submitting assignments in class or to the instructor during office hours.

6. When appealing a mark, students should refer to the University’s Procedures in the current UWO Academic Calendar (http://westerncalendar.uwo.ca/2014/pg112.html). Please note the relevant deadlines.

   The Department will not consider any appeal unless an attempt has been made to settle the matter first with your instructor. If after this discussion you remain dissatisfied with a grade or other decision, you may proceed with a written appeal (e-mails are not acceptable) to the Undergraduate Director in Economics, stating the reasons for your appeal. A useful form and checklist is provided at (http://economics.uwo.ca/undergraduate/program_counselling/responsibilities_policies.html#appeals).
7. Systematic adjustments of a class grade distribution (either up or down) can occur in Economics courses. The fact that grades have been adjusted is not grounds for an appeal.

8. Note the following add and drop deadlines:

   Last day to **add** a full course or First term half course:  
   **Friday, September 12th, 2014**  

   Last day to **drop** second term half course without academic penalty:  
   **Wednesday, November 5th, 2014**

9. Faculty of Social Science policy states that oversleeping or misreading an exam schedule is not an excuse for a make-up. This rule applies to all mid-term tests and final exams in the Department of Economics.

**Policy Regarding Makeup Tests and Final Examinations**

*Academic Accommodation will not be granted automatically on request.* You **must** demonstrate by documentation that there are **compelling** medical or compassionate grounds before academic accommodation will be considered.

If you decide to write a test or an examination, you must be prepared to accept the mark you earn. Rewriting tests or examinations, or having the value of the test or examination reweighted on a retroactive basis, is **not** permitted. Book airline flights after you know the dates of your final examinations. Airline flights must not conflict with test or final exams.

If you are requesting a makeup test for a midterm or a final examination, unless medically incapable, notify your instructor by email or phone, preferably prior to the scheduled date of the test, but definitely within **24 hours** of the date of the test or exam. Failure to follow this procedure may result in denial of a request for academic accommodation or result in a grade of zero. Set up an appointment as soon as possible to meet personally with your instructor. If the instructor is not available, you may send an email message, copying the Undergraduate Coordinator at econugrd@uwo.ca (Social Science Room 4075). **Notifying your instructor of a missed test or exam does not automatically entitle you to a makeup test.**

Students who seek a makeup test or examination must provide medical or other relevant verification that their absence from a regularly scheduled test or examination is beyond their control. Documentation must support your reasons. Medical documentation should be given to the Academic Counselling Office of your **home** Faculty **as soon as possible** (preferably **within 24 hours of the test**) if you know you may not be able to write your final examination on the scheduled day and time. Failure to follow this procedure, or to provide supporting documentation, may result in denial of a request for academic accommodation or result in a grade of zero. If your documentation is not acceptable, you will be given a zero for the missed test.

For personal illness, if you consult Student Health Services regarding your illness or personal problem, you should request a Student Medical Certificate from the physician. If
you were seen by an off-campus doctor, obtain a certificate from his/her office at the time of your visit. The off-campus medical certificate form must be used and can be found at: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf. Notes stating "For Medical Reasons" are not considered sufficient.

For any other circumstances, if you are not sure what documentation to provide, ask your Academic Counselor. If your documentation is judged sufficient, the academic counselor will issue a Recommendation for a Special Examination (a single form for midterms or a triple color form for final examinations). Once you have this form, contact your instructor as soon as possible to make arrangements. Even if approved from your home faculty Academic Counsellor, there is no guarantee that you will be allowed to write the makeup test and exam.

For final examinations, you need permission from your home Faculty Counsellor, your instructor, and the Department Undergraduate Director. Failure to follow this procedure may result in an examination grade of zero. You must ensure that the Special Examination form has been signed by the instructor and Department Undergraduate Director and that the form is returned to the Academic Counseling Office for approval without delay. Make-up final examinations, if permitted, will be written within one month of the end of the exam period.

**Policies Regarding Academic Accommodation**

Information about the Faculty of Social Science’s policies regarding academic accommodation is found on its website at http://counselling.ssc.uwo.ca/procedures/havingproblems.asp or in Social Science Room 2105. Your “Academic Rights and Responsibilities” are also outlined in the current UWO Calendar at http://westerncalendar.uwo.ca/2014/pg111.html. Claiming that “you didn’t know what to do” is not an acceptable excuse for not following the stated procedures.

**Policy Regarding Class Attendance**

If your instructor views your class attendance as unsatisfactory, you can be prohibited from writing the final examination. If there is intent to make use of this University policy, you will be notified in writing.

**Statement on Mental Health and Support Services**

If you or someone you know is experiencing emotional/mental distress, there are several resources here at Western to assist you. Please visit http://www.uwo.ca/uwocom/mentalhealth/ for more information and a complete list of resources, as well as how to obtain help.