# ECONOMETRICS II ECONOMICS 2123B-001 Department of Economics Western University

**Summer 2018** 

Instructor:Qian LiuOffice:SSC 4006Phone:(519) 661-2111 ext. 85202E-mail:qliu94@uwo.caOffice Hours:W, 1:00-3:00pmClassroom meeting times & location:M & W, 7:00-10:00pm, SSC 2032Course website:https://owl.uwo.ca/portalUndergraduate inquiries:519-661-3507 SSC Room 4075 or econugrd@uwo.ca

#### **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 any of your marks until your registration is corrected. You may check your timetable by using the Login on the Student Services website at <u>https://student.uwo.ca</u>. If you notice a problem, please contact your home Faculty Academic Counsellor immediately.

#### **Prerequisite Note:**

The prerequisites for this course are Economics 2122A/B; and 0.5 course from: Mathematics 1225A/B, Calculus 1000A/B, Calculus 1500A/B or the former Calculus 1100A/B.

You are responsible for ensuring that you have successfully completed all course prerequisites, and that you have not taken any anti-requisite courses. 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 Objectives:**

The goal of this course is to give students a thorough understanding of the basic tools of econometric analysis using commonly used regression models. The class will study both theoretical foundations and empirical applications of econometric models.

# **Course Learning Outcomes:**

- Students will learn how to formulate, estimate, and test economic models.
- Students will be able to identify what linear regression models reveal about economic relationships and interpret the obtained quantitative results.
- Students will learn and be able to apply appropriate techniques to perform valid statistical inference.

## **Textbook:**

Christopher Dougherty, Introduction to Econometrics, Fifth Edition, Oxford University Press, 2011

## **Lecture Slides:**

Most of the materials will come from the required textbook. The lecture slides will be posted on the course website. However, they may not have the detailed solutions and examples provided during the class time. If a student misses any classes, he/she is responsible for obtaining the notes from other students.

# Grading:

The course mark will be calculated as follows:

- 20% assignments
- 35% midterm exam
- 45% final exam

Requirements for this course include (1) two assignments, (2) a midterm exam, and (3) a final exam. Assignments are due at the beginning of the class. Late assignments (submitted later than 7:15pm) and missed assignments will be given a grade of zero.

The midterm exam will be held during class time. There will be **no make up for the midterm exam.** If you miss the midterm exam, it is your responsibility to inform the instructor within 48 hours of the exam. Otherwise, you will receive a mark of zero. Only for absences with a valid reason and with proper approved documentation, the weights of grading will be adjusted, i.e., the final exam weights 80%.

#### **Important Dates:**

Mon., June 18, First class meeting Wed., June 27, First assignment due at the beginning of class Wed., July 11, Midterm exam Mon., July 23, Second assignment due at the beginning of class Wed., July 25, Last class July 30-31 (TBA), Final exam

# **Outline:**

The chapters come from the Dougherty's Introduction to Econometrics text.

- Part I: Review of Probability and Statistics
  - 1. Random Variables, Sampling, and Estimation (Review)
- Part II: Regression Analysis
  - 1. Simple Regression Analysis (Chapter 1)
  - 2. Properties of Regression Coefficients and Hypothesis Testing (Chapter 2)
  - 3. Multiple Regression Analysis (Chapter 3)
  - 4. Nonlinear Models and Transformations of Variables (Chapter 4)
  - 5. Dummy Variables (Chapter 5)
- Part III: Improving Our Models
  - 1. Specification of Regression Variables (Chapter 6)
  - 2. Heteroscedasticity (Chapter 7)
  - 3. Measurement Error (Chapter 8)
- Part IV: Additional Topics in Regression Analysis
  - 1. Binary Choice and Limited Dependent Variables (Chapter 10)
  - 2. Time Series Analysis (Chapter 11, Chapter 12)

The coverage of topics in Part IV will be subject to time availability.

# Please Note Department Policies for Summer 2018

Remember that the University expects all students to take responsibility for their own Academic Programs. Students should also check their registration to ensure they 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: <u>http://westerncalendar.uwo.ca</u>.
- 2. Students must familiarize themselves with the "Rules of Conduct for Examinations" <u>http://www.uwo.ca/univsec/pdf/academic\_policies/exam/administration.pdf</u>.
- 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 an official academic transcript, suspension or expulsion.
- 4. **Plagiarism:** Students must write their essays and assignments in their own words. When taking an idea/passage from another author, it must be acknowledged with quotation marks where appropriate and referenced with footnotes or citations. Plagiarism is an academic offence (see Scholastic Discipline for Undergraduate Students in the Western Calendar at <a href="http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\_20">http://westerncalendar=Live&ArchiveID=#Page\_20</a>).

Western University uses software to check for plagiarism and students may be required to electronically submit their work. Those found guilty will be penalized as noted in point 3.

- 5. It is a Department of Economics policy that **NO** assignments be dated, stamped or accepted by staff. Students must submit assignments in class or to the instructor during office hours.
- When appealing a mark, students should refer to the Student Academic Appeals section in the current Western Academic Calendar at: <u>http://westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategory yID=1&SelectedCalendar=Live&ArchiveID=#Page\_14</u>. Please note the relevant deadlines.

The Department will not consider an appeal unless an attempt has been made to settle the matter with the instructor first. Students who remain dissatisfied with the outcome may proceed with a written appeal (e-mails are not acceptable) to the Undergraduate Director in Economics, stating the reasons for their appeal. A checklist is provided at: <a href="http://economics.uwo.ca/undergraduate/program\_counselling/responsibilities\_policies.htm">http://economics.uwo.ca/undergraduate/program\_counselling/responsibilities\_policies.htm</a> <a href="http://economics.uwo.ca/undergraduate/program\_counselling/responsibilities\_policies.htm">http://economics.uwo.ca/undergraduate/program\_counselling/responsibilities\_policies.htm</a> <a href="http://economics.uwo.ca/undergraduate/program\_counselling/responsibilities\_policies.htm">http://economics.uwo.ca/undergraduate/program\_counselling/responsibilities\_policies.htm</a> <a href="http://economics.uwo.ca/undergraduate/program\_counselling/responsibilities\_policies.htm">http://economics.uwo.ca/undergraduate/program\_counselling/responsibilities\_policies.htm</a>

- 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:

Deadlines to add courses in the summer:	
Distance Studies:	Friday May 11, 2018
Intersession:	Tuesday May 15, 2018
Summer Evening (first term):	Friday May 11, 2018
Summer Evening (second term):	Friday June 22, 2018
Deadlines to drop courses in the summer	r:
Distance Studies:	Monday June 11, 2018
Intersession:	Monday June 4, 2018
Summer Evening (first term):	Monday June 4, 2018
Summer Evening (second term):	Monday July 16, 2018

9. Faculty of Social Science policy states that oversleeping or misreading an exam schedule is NOT grounds for a makeup. This rule applies to midterm and final exams in the Department of Economics.

## **Policy Regarding Makeup Tests and Final Examinations**

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

Students who proceed to write a test or examination must be prepared to accept the mark. Rewriting tests or examinations, or having their value reweighted on a retroactive basis, is **not** permitted. Students must also book travel arrangements AFTER final exam dates have been posted as they must not conflict with test or final exams.

Unless medically incapable of doing so, students must notify their instructor prior to the test date or at least within **24 hours** when requesting a makeup exam. Failure to follow this procedure may result in denial of academic accommodation and a grade of zero. Students should also set up an appointment as soon as possible to meet with their instructor. If the instructor is not available, send an email message, copying the Undergraduate Coordinator at <u>econugrd@uwo.ca</u>. Notifying instructors of a missed exam does not automatically entitle students to a makeup.

Students who seek a makeup exam must also provide supporting medical or other relevant documentation that their absence from a scheduled test or exam is beyond their control. Documentation should be submitted to the Academic Counselling Office of the student's *home* Faculty **as soon as possible (preferably within 24 hours of the scheduled test)**. Failure to follow this procedure may result in denial of academic accommodation and a grade of zero. If the documentation submitted is not acceptable, students will receive a zero for the missed test.

For personal illness, students may consult Student Health Services and request a Student Medical Certificate from the physician. If assessed by an off-campus doctor, students must obtain a certificate from his/her office at the time of the visit. The off-campus medical certificate form must also 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 religious or compassionate circumstances, students should ask their Academic Counsellor what documentation to provide. If documentation is judged sufficient, the Academic Counsellor will issue a Recommendation for a Special Examination (a single form for midterms or a triple-color form for final exams). Once students have this form, they must contact their instructor as soon as possible to make arrangements. Even if approved by their Academic Counsellor, there is no guarantee that students will be allowed to write the makeup test/exam.

For final examinations, students need to seek permission from their *home* Faculty Counsellor, Instructor, and the Department Undergraduate Director. Failure to follow this procedure may result in a grade of zero. Students 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 Counselling Office for approval without delay. If approved, makeup examinations will be written within one month of the end of the exam period.

#### **Policies Regarding Academic Accommodation**

The Faculty of Social Science's policies regarding academic accommodation is found at <a href="http://counselling.ssc.uwo.ca/procedures/having\_problems/index.html">http://counselling.ssc.uwo.ca/procedures/having\_problems/index.html</a>. "Academic Rights and Responsibilities" are also outlined in the Western Calendar at

<u>http://westerncalendar.uwo.ca/PolicyPages.cfm?PolicyCategoryID=1&command=showCatego</u> <u>ry&SelectedCalendar=Live&ArchiveID</u>=. 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 the instructor deems a student's class attendance as unsatisfactory, that student may be prohibited from writing the final examination. If there is intent to make use of this University policy, the student will be notified in writing.

#### Statement on Mental Health and Support Services

Students under emotional/mental distress should visit <u>http://uwo.ca/health/mental\_wellbeing/</u> for more information and a complete list of resources on how to obtain help.