### **HURON UNIVERSITY COLLEGE**

## ECONOMICS 3313E RESEARCH METHODS FALL/WINTER 2017-2018

#### **COURSE OUTLINE**

Instructor: Dr. Özden Sungur

Office: A215

**E-mail:** osungur@huron.uwo.ca **Phone:** (519) 438-7224 ext. 257

Class Schedule: Tuesday 10:30am-1:20pm

**Room:** W102

**Office hours:** Tuesday 2:00-3:00pm or by appointment.

Course Description: Economics 3313E is a full-year course designed to cultivate students' technical and quantitative abilities for applied economic research. The first term will start with a review of linear regression techniques and their application to real-world problems. A number of nonlinear regression functions will also be discussed. The first part of the course will conclude with a discussion of issues pertaining to the assessment of econometric analysis based on multiple regression. The second portion of the course will introduce students to further topics in regression analysis such as panel data regression, regression with a binary dependent variable, and instrumental variables regression.

**Course Objectives:** This course aims to help students to relate econometric theory to practice through use of real-world problems and data. By the end of this course, students should have good knowledge of the tools of regression analysis and the ability to apply them to economic data. They should be able to critically evaluate empirical research and be able to communicate research results through project reports as well as oral presentations.

**Class Methods:** We will meet for one three-hour class per week. The class time will be divided between a lecture and a computer lab component. Lectures will provide theoretical background on the topics while computer lab classes will focus on application of theory to real-world data using STATA statistical software.

**Textbook:** Stock, James H. and Mark W. Watson, <u>Introduction to Econometrics</u> (Third Edition), Addison-Wesley, 2011, (hereafter SW).

**Software:** STATA statistical software is available for use in Huron Computer Lab. Please note that the software used on University facilities is provided under license agreements with various vendors. Unless explicitly stated otherwise you must assume that all software on all systems is protected by copyright.

**Evaluation:** Assessment in the course will be based on:

Exam I: Tuesday, November 21, 2017 - In class (15%)

**Empirical Project I**: Details will be provided later in class with a separate distribution.

Proposals due on Tuesday, October 17, 2017 (10%)

Presentations start on Tuesday, November 28, 2017

Written report due on Friday, December 8, 2017 (20%)

**Exam II**: Tuesday, March 20, 2018 - In class (20%)

**Empirical Project II**: Details will be provided later in class with a separate distribution.

Proposals due on Tuesday, February 6, 2018 (10%)

Presentations start on Tuesday, March 27, 2018

Written report due on Wednesday, April 11, 2018 (25%)

## **Tentative Course Schedule\*:**

### Fall Term

Week 1	Linear Regression with One Regressor (SW Ch 4)
Week 2	Hypothesis Tests and Confidence Intervals: Regression with a Single Regressor (SW Chapter 5)
Week 3	Presentation on data resources available at Western Computer lab class on data search
Week 4	Linear Regression with Multiple Regressors (SW Chapter 6)
Oct. 9-13	Fall Reading Week - No Classes
Week 6	Hypothesis Tests and Confidence Intervals: Multiple Regression (SW Chapter 7)

Week 7	Nonlinear Regression Functions (SW Chapter 8)
Week 8	Nonlinear Regression Functions continued
Week 9	Assessing Studies Based on Multiple Regression (SW Chapter 9)
Week 10	Internal and External Validity (SW Chapter 9)
Week 11	Midterm I
Week 12	Review of midterm questions Presentations
Week 13	Presentations Project reports are due
Winter Term	
Week 1	Regression with Panel Data (SW Chapter 10) Panel Data
Week 2	Fixed Effects Regression
Week 3	Regression with Time Fixed Effects
Week 4	Regression with a Binary Dependent Variable (SW Chapter 11) The Linear Probability Model
Week 5	Probit and Logit Regression
Week 6	Estimation and Inference in Probit and Logit Models
Feb. 19-23	Reading Week – No Classes
Week 8	Instrumental Variables Regression (SW Chapter 12) IV Estimator - Single Regressor and Single Instrument
Week 9	General Instrumental Variables Regression Model
Week 10	Instrument Validity

Week 11

Midterm II

Week 12 Review of midterm questions

**Presentations** 

Week 13 Presentations

Week 14 Review

Project reports are due

\*The course will follow approximately this schedule. This is tentative list of topics. Some topics may be added or deleted as the course progresses.



## **Appendix to Course Outlines**

## **Prerequisite Information**

Students are responsible for ensuring that they have successfully completed all course prerequisites. Unless you have either the requisites for this course or written special permission from your Provost and Dean to enrol in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

## Conduct of Students in Classes, Lectures, and Seminars

Membership in the community of Huron University College and the University of Western Ontario implies acceptance by every student of the principle of respect for the rights, responsibilities, dignity and well-being of others and a readiness to support an environment conducive to the intellectual and personal growth of all who study, work and live within it. Upon registration, students assume the responsibilities that such registration entails. The academic and social privileges granted to each student are conditional upon the fulfillment of these responsibilities.

In the classroom, students are expected to behave in a manner that supports the learning environment of others. Students can avoid any unnecessary disruption of the class by arriving in sufficient time to be seated and ready for the start of the class, by remaining silent while the professor is speaking or another student has the floor, and by taking care of personal needs prior to the start of class. If a student is late, or knows that he/she will have to leave class early, be courteous: sit in an aisle seat and enter and leave quietly.

Please see the *Code of Student Rights and Responsibilities* at: <a href="http://www.huronuc.ca/CurrentStudents/StudentLifeandSupportServices/StudentDiscipline">http://www.huronuc.ca/CurrentStudents/StudentLifeandSupportServices/StudentDiscipline</a>

### **Technology**

It is not appropriate to use technology (such as, but not limited to, laptops, cell phones) in the classroom for non-classroom activities. Such activity is disruptive and is distracting to other

students and to the instructor, and can inhibit learning. Students are expected to respect the classroom environment and to refrain from inappropriate use of technology and other electronic devices in class.

## Academic Accommodation for Medical/Non-Medical Grounds

Students who require special accommodation for tests and/or other course components must make the appropriate arrangements with the Student Development Centre (SDC). Further details concerning policies and procedures may be found at:

http://www.sdc.uwo.ca/ssd/?requesting acc

# (a) <u>Medical Grounds</u> for assignments <u>worth 10% or more of final grade</u>: Go Directly to Academic Advising

University Senate policy, which can be found at <a href="http://www.uwo.ca/univsec/pdf/academic policies/appeals/accommodation medical.pdf">http://www.uwo.ca/univsec/pdf/academic policies/appeals/accommodation medical.pdf</a>, requires that all student requests for accommodation on medical grounds for assignments worth 10% or more of the final grade be made directly to the academic advising office of the home faculty (for Huron students, the "home faculty" is Huron), with supporting documentation in the form (minimally) of the Senate-approved Student Medical Certificate found at: <a href="http://www.uwo.ca/univsec/pdf/academic policies/appeals/medicalform">http://www.uwo.ca/univsec/pdf/academic policies/appeals/medicalform 15JUN.pdf</a>.

The documentation is submitted in confidence and will not be shown to instructors. The advisors will contact the instructor when the medical documentation is received, and will outline the severity and duration of the medical challenge as expressed on the Student Medical Certificate and in any other supporting documentation. The student will be informed that the instructor has been notified of the presence of medical documentation, and will be instructed to work as quickly as possible with the instructor on an agreement for accommodation. The instructor will not normally deny accommodation where appropriate medical documentation is in place and where the duration it describes aligns with the due date(s) of assignment(s). Before denying a request for accommodation on medical grounds, the instructor will consult with the Provost and Dean. The instructor's decision is appealable to the Provost and Dean.

# (b) Accommodation on <u>Medical Grounds</u> for assignments worth <u>less than 10%</u> of final grade: Consult Instructor Directly

When seeking accommodation on medical grounds for assignments worth less than 10% of the final course grade, the student should contact the instructor directly. The student need only share broad outlines of the medical situation. The instructor **may** require the student to submit documentation to the academic advisors, in which case she or he will advise the student and inform the academic advisors to expect documentation. The instructor may <u>not</u> collect medical documentation. The advisors will contact the instructor when the medical documentation is received, and will outline the severity and duration of the medical challenge as expressed on the Student Medical Certificate and in any other supporting documentation. The student will be informed that the instructor has been notified of the presence of medical documentation, and will be instructed to work as quickly as possible with the instructor on an agreement for accommodation. The instructor will not normally deny accommodation where appropriate medical documentation is in place and where the duration it describes aligns with the due date(s) of assignment(s). Before denying a request for accommodation on medical grounds, the instructor will consult with the Provost and Dean. The instructor's decision is appealable to the Provost and Dean.

## (c) Non-medical Grounds: Consult Instructor Directly

Where the grounds for seeking accommodation are not medical, the student should contact the instructor directly. Late penalties may apply at the discretion of the instructor. Apart from the exception noted below, academic advisors will not be involved in the process of accommodation for non-medical reasons.

Where a student seeks accommodation on non-medical grounds where confidentiality is a concern, the student should approach an academic advisor with any documentation available. The advisors will contact the instructor after the student's request is received, and will outline the severity and duration of the challenge without breaching confidence. The student will be informed that the instructor has been notified that significant circumstances are affecting or have affected the student's ability to complete work, and the student will be instructed to work as quickly as possible with the instructor on an agreement for accommodation. Before denying a request for accommodation where documentation has been submitted to an academic advisor, the instructor will consult with the Provost and Dean. The instructor's decision is appealable to the Provost and Dean.

### **Statement on Academic Offences**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: <a href="http://www.uwo.ca/univsec/pdf/academic\_policies/appeals/scholastic\_discipline\_undergrad.pdf">http://www.uwo.ca/univsec/pdf/academic\_policies/appeals/scholastic\_discipline\_undergrad.pdf</a>

## **Statement on Academic Integrity**

The International Centre for Academic Integrity defines academic integrity as "a commitment, even in the face of adversity, to five fundamental values: honesty, trust, fairness, respect, and responsibility. From these values flow principles of behaviour that enable academic communities to translate ideals to action." (CAI Fundamental Values Project, 1999).

A lack of academic integrity is indicated by such behaviours as the following:

Cheating on tests:

Fraudulent submissions online;

Plagiarism in papers submitted (including failure to cite and piecing together unattributed sources);

Unauthorized resubmission of course work to a different course:

Helping someone else cheat:

Unauthorized collaboration;

Fabrication of results or sources:

Purchasing work and representing it as one's own.

### **Academic Integrity: Importance and Impact**

Being at university means engaging with a variety of communities in the pursuit and sharing of knowledge and understanding in ways that are clear, respectful, efficient, and productive. University communities have established norms of academic integrity to ensure responsible, honest, and ethical behavior in the academic work of the university, which is best done when sources of ideas are properly and fully acknowledged and when responsibility for ideas is fully and accurately represented.

In the academic sphere, unacknowledged use of another's work or ideas is not only an offence against the community of scholars and an obstacle to academic productivity. It may also be understood as fraud and may constitute an infringement of legal copyright.

A university is a place for fulfilling one's potential and challenging oneself, and this means rising to challenges rather than finding ways around them. The achievements in an individual's university studies can only be fairly evaluated quantitatively through true and honest representation of the actual learning done by the student. Equity in assessment for all students is ensured through fair representation of the efforts by each.

Acting with integrity at university constitutes a good set of practices for maintaining integrity in later life. Offences against academic integrity are therefore taken very seriously as part of the university's work in preparing students to serve, lead, and innovate in the world at large.

A university degree is a significant investment of an individual's, and the public's, time, energies, and resources in the future, and habits of academic integrity protect that investment by preserving the university's reputation and ensuring public confidence in higher education.

Students found guilty of plagiarism will suffer consequences ranging from a grade reduction to failure in the course to expulsion from the university. In addition, a formal letter documenting the offence will be filed in the Provost and Dean's Office, and this record of the offence will be retained in the Provost and Dean's Office for the duration of the student's academic career at Huron University College.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com.

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Personal Response Systems ("clickers") may be used in some classes. If clickers are to be used in a class, it is the responsibility of the student to ensure that the device is activated and functional. Students must see their instructor if they have any concerns about whether the clicker is malfunctioning. Students must use only their own clicker. If clicker records are used to compute a portion of the course grade:

- the use of somebody else's clicker in class constitutes a scholastic offence,
- the possession of a clicker belonging to another student will be interpreted as an attempt to commit a scholastic offence.

### **Policy on Special Needs**

Students who require special accommodation for tests and/or other course components must make the appropriate arrangements with the Student Development Centre (SDC). Further details concerning policies and procedures may be found at:

http://www.sdc.uwo.ca/ssd/?requesting\_acc

## **Attendance Regulations for Examinations**

A student is entitled to be examined in courses in which registration is maintained, subject to the following limitations:

- 1) A student may be debarred from writing the final examination for failure to maintain satisfactory academic standing throughout the year.
- 2) Any student who, in the opinion of the instructor, is absent too frequently from class or laboratory periods in any course will be reported to the Provost and Dean of the Faculty offering the course (after due warning has been given). On the recommendation of the Department concerned, and with the permission of the Provost and Dean of that Faculty, the student will be debarred from taking the regular examination in the course. The Provost and Dean of the Faculty offering the course will communicate that decision to the Provost and Dean of the Faculty of registration.

## **Class Cancellations**

In the event of a cancellation of class, every effort will be made to post that information on the Huron website, <a href="http://www.huronuc.ca/AccessibilityInfo">http://www.huronuc.ca/AccessibilityInfo</a> ("Class Cancellations").

### Mental Health @ Western

Students who are in emotional/mental distress should refer to Mental Health @ Western <a href="http://www.uwo.ca/uwocom/mentalhealth/">http://www.uwo.ca/uwocom/mentalhealth/</a> for a complete list of options about how to obtain help.

### **Academic Advising**

For advice on course selections, degree requirements, and for assistance with requests for medical accommodation [see above], students should contact an Academic Advisor in Huron's Student Support Services (huronsss@uwo.ca). An outline of the range of services offered is found on the Huron website at: <a href="http://www.huronuc.ca/CurrentStudents/AcademicAdvisorsandServices">http://www.huronuc.ca/CurrentStudents/AcademicAdvisorsandServices</a>

Department Chairs and Program Directors and Coordinators are also able to answer questions about their individual programs. Their contact information can be found on the Huron website at: <a href="http://www.huronuc.ca/Academics/FacultyofArtsandSocialScience">http://www.huronuc.ca/Academics/FacultyofArtsandSocialScience</a>