



ST. FRANCIS XAVIER UNIVERSITY

ECONOMICS

Econ 371: Econometrics I FALL 2020

F. SUMMERFIELD

Email: fsummerf@stfx.ca

Office Hours: (BB Collaborate)

Wed & Thurs 14:30 – 15:30

Or by appointment

Lectures: MULH 3026

Wednesday 15:45 – 17:00

Friday 14:15 – 15:30

COURSE DESCRIPTION

The course will introduce students to the Econometrics – the statistical practices used to evaluate economic theory and quantify economic relationships. Part of this course will be econometric theory: the principles and mathematics that define the proper way to measure economic relationships from (cross-sectional) data. Concurrently, students will learn to use computer software to implement these methods using real world data. Please note the prerequisites for the course in the academic calendar. A basic background in statistics and mathematics is assumed.

COURSE MATERIALS

LECTURE NOTES

Lectures will follow the textbook chapters closely. Students are responsible for lecture content and absence from class is not grounds for relief of this responsibility.

REQUIRED TEXT

(JW) “Introductory Econometrics” by: Jeffrey Wooldridge.

This is a widely-used textbook and used editions should be easy to obtain. Please note that this textbook is currently in its 7th edition. However, earlier editions (4th - 6th) are also suitable.

REQUIRED SOFTWARE

STATA – this software is available through the university. IT services is currently creating a software (MyLabApps) for access from your own computer. Once labs are re-opened, STATA will also be available on lab computers campus wide. You may use an alternative software at your own risk. See details below.

COURSE OUTLINE* & REQUIRED READINGS (chapters listed from JW)

Part A)	INTRODUCTION & REVIEW 01: What is Econometrics 02: Random Variables 03: Probability Distributions 04: Joint Distributions Introduction to Stata	(2.5 Weeks) Ch1 Apx B.1 Apx B.2 – B.3 Apx B.4 – B.5 Notes
Part B)	THE SIMPLE REGRESSION MODEL 05: Linear Regression Model 06: OLS Estimation 07: Method of Moments & OLS Properties 08: Model Fit and Units of Measure 09: Sampling Distributions	(3 Weeks) Ch2.1 Ch2.2 Ch2.2 – 2.3 Ch2.3 – 2.4 Ch2.5, Apx C.1 – C.2
Part C)	MULTIPLE REGRESSION 10: Multivariate OLS 11: Specification - variables 12: Specification - functional form	(1.5 Weeks) Ch3.1 – 3.2 & 6.3a Ch3.3 – 3.4a & 3.5 Ch2.4b & Ch 6.2a-b
Part D)	INFERENCE & TESTING 13: Testing single parameters 14: Testing multiple parameters 15: OLS Asymptotics	(1.5 Weeks) Ch4.1 – 4.3 Ch4.4 & 4.5 Ch5.1- Ch5.2
Part E)	PRACTICAL MATTERS 16: Binary independent variables 17: Binary dependent variable models 18: Testing and Robust Inference 19: Weighted Least Squares	(2 Weeks) Ch7.1 – 7.3 Ch7.5 & 17.1 – 17.2 Ch8.1 – 8.3 Ch8.4

EVALUATION

Midterm Exam	Covering Part A and Part B In Class: Oct. 23rd	25%
Problem Sets	Best 6/8 worth 7.5% each. Bonus 2% for passing grade on all 8. Due:* (1) Oct 2 nd (2) Oct 9 th (3) Oct 16 th (4) Oct 30 th (5) Nov 6 th (6) Nov 13 th (7) Nov 20 th (8) Nov 27 th	45%
Final Exam	Cumulative of Parts A-E, with emphasis on Parts C D and E	30%

* The schedule is approximate and progression through the material may vary. Thus, problem set due-dates may be adjusted as necessary. However, no more than one problem set will be due each week. Solutions will be posted on moodle after each problem set is submitted.

EXAMS:

Students who miss the Midterm exam due to illness or compassionate reasons will have the opportunity to sit the exam at a later date during office hours. Those wishing to take advantage of this accommodation should contact the instructor no later than one lecture after missing the original exam sitting. The re-write date must be set within 10 calendar days of the original exam. Standard StFX policies apply in the case of illness during final exams. Please note that, **in the event that campus is closed for weather or public health reasons, the exam will take place as scheduled on moodle**. The exam questions will be posted slightly before the start of class time and answers will be uploaded and/or entered into moodle by a deadline slightly after the class end time. Further details will be provided if this scenario arises.

PROBLEM SETS:

Problem sets will include a mixture of textbook questions and applied questions that make use of the statistical software package STATA. Please note that I am happy for students to use other packages they may already be familiar with (for example R), however I can offer somewhat less help with R, and perhaps no help with other software packages such as SPSS. Therefore I recommend STATA. MS Excel will not be capable enough for everything we do in this course.

Problem sets will be distributed in class at least one week in advance of the due dates. I encourage you to support each other by working in groups to solve the problems. Ideally, attempt the problems on your own and come together to compare answers and learn from each other. You must submit your own problem sets even if you work together. Problem sets are **to be submitted in hard-copy** during lectures. In the event of campus closure, uploads to moodle will be used in place of hard copies.

Students are given choice in how they complete the problem sets. There are a total of 8, roughly one per week during the term. Late problem sets will not be accepted and will receive a mark of zero, with no exceptions; forgiveness to accommodate sickness and other compassionate concerns is automatic because only the best 6 of 8 assignments will count towards the final grade. Students are **highly discouraged** from intentionally skipping a problem set since further accommodation is generally not possible. Furthermore, problem sets are the best practice for exam questions. Students who face particular difficult circumstances are encouraged to consult with me before missing more than 2 problem sets so appropriate accommodations can be made.

Please note that requests for extra work to make up for low grades, including assignments and essays, will not be possible. It is your responsibility to track your progress over the term and seek help on difficult subjects. I am approachable and very happy to help *throughout* the semester.
