York University
Faculty of Liberal Arts & Professional Studies
Department of Economics

AP/ECON3210A
Use of Economic Data
Fall 2024 Course Outline

Course Instructor Information:
Name: David K. Lee, Ph. D.
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Course Consultation Hours: By appointment (In-person or zoom meeting, Zoom connection information will be available through eclass)
Course Web Site: eclass

Calendar Course Description / Prerequisite / Co-Requisite:
Introduces the theory and practice of empirical analysis of economic models. Develops tools to estimate economic relationships involving two or more variables and to test their significance. Relies on the use of Canadian data sets and statistical software packages to show how linear regression analysis is applied. Prerequisite: AP/ECON 2500 3.00 or equivalent. Note: No credit will be retained for this course for students who have successfully completed or who are currently enrolled in AP/ECON 4210 3.00. Course credit exclusions: HH/PSYC 3030 6.00, SC/MATH 3330 3.00. Note: Acceptable course substitutes are available in the Calendar. PRIOR TO FALL 2009: Course credit exclusions: SC/BIOL 2060 3.00, AK/AS/ECON 3210 3.00, AK/AS/SC/MATH 3033 3.00, AS/SC/MATH 3330 3.00.

Lecture Time and Location
Th 11:30am-2:30pm, ACE 001

Teaching Assistants: TBA

Organization of the Course
This course involves formal lectures presented by the course instructor. The classroom technology will be used extensively, such as PowerPoint, or MS word format presentation. There will be extensive usages of the course web site. Reading assignments, practice problems, problem solving, etc., for each lecture session, tutorial sessions or TA availability, etc., will be announced on the course web site.

Technical requirements for taking the course:

This course is, in principle, a face-to-face lecture in a classroom. However, the Covid-19 situation is still ongoing, so online lecture deliveries can resume at any time, and some student consultations are expected to take place online. The technical features, a computer with microphone and webcam, and a high speed and reliable internet connection, and/or a smart device with these features, are required for students in order to fully participate in the course. There are some live information sessions including Q & A that may be conducted through Zoom video conferencing, where students are expected to participate. Also, students may be required to appear on video for exams/tests proctoring purposes. If you are not comfortable with these requirements, you should not enroll in this section of the course.

Students shall note the following:
- Zoom is hosted on servers in the U.S. This includes recordings done through Zoom.
- If you have privacy concerns about your data, provide only your first name or a nickname when you join a session.
- The system is configured in a way that all participants are automatically notified when a session is being recorded. In other words, a session cannot be recorded without you knowing about it.

Here are some useful links for student computing information, resources and help:
Student Guide to Moodle
Zoom@YorkU Best Practices
Zoom@YorkU User Reference Guide
Computing for Students Website
Student Guide to eLearning at York University

To determine Internet connection and speed, there are online tests, such as Speedtest, that can be run.

Expanded Course Description

The primary goal for this course is to make students in understanding statistical methods for estimating economic relationships, testing economic theories, and evaluating and implementing government and business policy. This course examines what happens when economic data do not satisfy the assumptions of the Classical Linear Regression Model. It explains why ordinary least squares methods are not appropriate in the presence of, for example, heteroscedasticity, and how estimation techniques have to be modified to take these problems into account. Extensive use will be made of software packages.

In general, students are required to have backgrounds in probability and statistics. In addition, (although not formally required) students are assumed to have backgrounds in calculus and linear algebra.

Course Learning Objectives

This course focuses the theory and practice of econometric analysis of economic models. The basic probability and statistics will be reviewed in the beginning of the course. Linear regression analysis, both simple and multiple regressions including various functional forms of regression model such as binary dependent variable, then will be examined. The topics for the cases in which the assumptions of the classical linear regression model are relaxed such as multicollinearity, and heteroskedasticity will be examined. Throughout the course, statistical software packages will be used to show how the theory is applied.

Textbook (Required):

Wooldridge, Jeffery M., _Introductory Econometrics: A Modern Approach_, 7th Edition. Cengage Learning. 2020.

Evaluation *
The grade for this course is composed of the mark received for each of the following components:

Type of Assessment	Format	Percent/Weight		Date
		A	**B**	
Assignment I	Individual/			TBA
Assignment II	Online Turnitin Submission	10%		
Midterm Exam (120 min)	In-class	30%	0%	Oct 24
Final Exam (180 min)	In-class	60%	90%	Dec 5-20
TOTAL		**100%**	**100%**	
		Bonus	Bonus	
Course Grade = Max {A, B}				

The following conversions will be used in converting percentage grades to letter grades:
90-100 (A+),   80-89 (A), 75-79 (B+),   70-74 (B), 65-69 (C+),   60-64 (C), 55-59 (D+),   50-54 (D), 40-49 (E),   0-39 (F).

Please note that I strongly believe that the best learning experiences occur when there is healthy attendance and discussions in the classroom. Therefore, I have a policy to give some bonus points based on **class attendance and participation (usually no more than 5%)** to encourage attendance and classroom discussion. Feel free to ask any questions or simply make comments on relevant topics at any time.

Problem sets will be posted in the course web site throughout the semester. Some of them may be solved in class. These problems will not be graded; however, I encourage you to work through them. It will help you understanding the course material and consequently, increase the probability that you will do well in the course. Practice may not always make perfect, but it's a good start.

No Makeup Midterm

There are no makeups for missed midterm exam. If anyone does not take the midterm exam, the weight of the midterm exam will automatically be transferred to the final exam.

Requesting Deferred Final Exam

Students will be required to complete a Mach form requesting a deferred exam. For complete instructions for using the Mach form, please go to our website:

https://www.yorku.ca/laps/econ/undergraduate-programs/academic-resources/department-policies/deferred-standing/

A student must submit the form within 5 business days from the final exam date.

Assignments:

One of the purposes of this course is to learn real econometric applications for students. Students are required to complete research projects of an econometric model application with statistical software such as SAS, SPSS, STATA, or R. SAS and SPSS are ones of the most powerful statistical languages. SAS is widely used software for virtually every field. STATA is statistical software, in general, specialized for economics and/or econometrics. STATA is useful software for students who plan to study further in economics (masters or Ph. D level). R is a relatively newly introduced but very popular and powerful programming language for data analysis. Students will have to complete two projects during the semester using at least one of the programs listed above.

If a student has access to other programming languages such as GAUSS, SHAZAM, and TSP, and wants to apply one of these, he/she should consult with the instructor.

If a student wish to use software on your personal computer for free through York, please go to https://myapps.yorku.ca/ and log in with your passport York ID. You will be asked to download an app. Please do so and follow all the instructions.

After the app is installed on your computer, scroll down the list of applications on the MyApps website and find R, SAS, or SPSS. Hovering your mouse over it and clicking "virtual" should launch those on your desktop.

R and RStudio

As explained above, students can use any software, but R is the recommended program for this course. R (https://www.r-project.org) is a free, open-source programming language for statistical computing. RStudio (https://rstudio.com) is a free, open-source R programming environment. It contains a built-in code editor, many features to make working with R easier, and works the same way across different operating systems.

You will need regular, reliable access to a computer running an updated version of the software.

Tentative Sequence of Topics Covered and the Lecture Schedule

Session	Topic	Reading and Activity
01 Sep 5	Introduction: Nature of Econometrics	Ch 1
02 Sep 12	Review of Basic Statistics	Appendices: A and B
03 Sep 19	The Simple Regression Model	Ch 2
04 Sep 26		
05 Oct 3 (**Online**)	The Estimation of Multiple Regression Model	Ch 3
06 Oct 10 (**Possible Online**)	The Estimation of Multiple Regression Model	Ch 3
Reading Week: Oct 12- 18		
07 Oct 24	**Midterm Exam (Sessions 1 to 6 covered)** **(Note: Drop Deadline: Nov 8)**	
08 Oct 31	The Inference of Multiple Regression Model	Ch 4
09 Nov 7	Multiple Regression: Further Issues	Ch 6
10 Nov 14	Dummy Variables	Ch 7
11 Nov 21	LPM, Logit, and Probit Models	Notes
12 Nov 28		
Final Exam	**Dec 5-20**	

New Information and Changes:

The schedule is subject to change –sometimes there are unexpected absences, or we bog down on an issue. Check your class notes or contact me for up-dated work schedules.

It may be very possible to make some adjustments of lectures and/or exams schedules. Students may also have handouts for the topics discussed in the class. It is students' responsibility to be aware of any policy (or schedule change), or to collect handouts from classes. If you miss classes, contact the instructor before or immediate after, and check if there is any policy change or handout distributed.

There is no excuse for not knowing course policies or schedule changes, or for not having handouts.

Please also review the following course policies:

Academic Integrity

Academic integrity is a fundamental and important value of York University. To maintain a fair and honest learning environment, students in this course are responsible for understanding and upholding academic integrity in all of their academic activities. To better understand expectations, familiarize yourself with the Senate Policy on Academic Conduct. To learn more about how to demonstrate academic integrity in your courses and to access related resources and support, visit the Academic Integrity website.

Accessibility

While all individuals are expected to satisfy the requirements of their program of study and to aspire to achieve excellence, the University recognizes that persons with disabilities may require reasonable accommodation to enable them to perform at their best. The University encourages students with disabilities to register with Student Accessibility Services to discuss their accommodation needs as early as possible in the term to establish the recommended academic accommodations that will be communicated to Course Directors through their Letter of Accommodation (LOA).

Please let your instructor know as early as possible in the term if you anticipate requiring academic accommodation so that we can discuss how to consider your accommodation needs within the context of this course. Sufficient notice is needed so that reasonable steps for accommodation can be discussed. Accommodations for tests/exams normally require three (3) weeks (or 21 days) before the scheduled test/exam to arrange.

Religious Observance Accommodation

York University is committed to respecting the religious beliefs and practices of all members of the community, and making reasonable and appropriate accommodations to adherents for observances of special significance. Should any of the dates specified in this syllabus for course examinations, tests, or deadlines conflict with a date of religious significance, please contact the instructor within the first three (3) weeks of class. If the date falls within the formal examination periods, you must complete and submit a Religious Accommodation for Examination Form at least three (3) weeks before the start of the exam period.

Intellectual Property

Course materials are designed for use as part of this particular course at York University and are the intellectual property of the instructor unless otherwise stated. Third-party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian copyright law. Students may not publish, post on an Internet site, sell, or otherwise distribute any course materials or work without the instructor's express permission. Course materials should only be used by students enrolled in this course.

Copying this material for distribution (e.g., uploading material to a commercial third-party website) may lead to a charge of misconduct according to York's Code of Student Rights and Responsibilities, the Senate Policy on Academic Honesty, and/or legal consequences for copyright violations.

Student Conduct in the Learning Environment

York University is committed to fostering teaching and learning environments that are free of disruptive and/or harassing behaviour, are physically safe, and conducive to effective teaching and learning. Students and instructors are expected to maintain a professional relationship characterized by courtesy, civility, and mutual respect and to refrain from actions disruptive to such a relationship. Individuals who fail to adhere to such standards and who violate University or public law may be subject to disciplinary action by the University.

For more information, see the policies on Disruptive and/or Harassing Behaviour in Academic Situations, the Student Conduct and Responsibilities, and the Code of Student Rights & Responsibilities.

Netiquette for eClass and Online Learning

Students and instructors have a joint responsibility to create and maintain a welcoming and inclusive learning environment. All students are expected to conduct themselves in accordance with the Code of Student Rights and Responsibilities. Please review and familiarize yourself with behaviours that support "netiquette" in virtual classrooms by consulting the Guide to Netiquette and Student Guide to eLearning.

Student Notice of Recording for Online Teaching and Learning

Activities for this course involve recording, in partial fulfillment of the course learning outcomes. Images, audio, text/chat messaging that have been recorded may be used and/or made available by the University to students enrolled in the course and those supporting the course for the purpose of materials review, for assessment, etc. Recordings will be managed according to the University's Common Record Schedule and will be securely destroyed when no longer needed by the University. Your personal information is protected in accordance with York University's Guidelines on Access of Information and Protection of Privacy and the Freedom of Information and Protection of Privacy Act. Access to online materials, including recordings or live meetings, is subject to York University's Senate Policy on Computing and Information Technology Facilities.

The University will use reasonable means to protect the security and confidentiality of the recorded information, but cannot provide a guarantee of such due to factors beyond the University's control, such as recordings being forwarded, copied, intercepted, circulated, disclosed, or stored without the University's knowledge or permission, or the introduction of

malware into computer system which could potentially damage or disrupt the computer, networks, and security settings. The University is not responsible for connectivity/technical difficulties or loss of data associated with your hardware, software, or Internet connection.

By engaging in course activities that involve recording, you are consenting to the use of your appearance, image, text/chat messaging, and voice and/or likeness in the manner and under the conditions specified herein. In the case of a live stream recording, if you choose not to have your image or audio recorded, you may disable the audio and video functionality. If you choose to participate using a pseudonym instead of your real name, you must disclose the pseudonym to your instructor in advance to facilitate class participation.

You are not permitted to disclose the link to/URL of an event or an event session recording or copies of recording to anyone, for any reason. Recordings are available only to authorized individuals who have been directly provided the above instructions/link for their use. Recordings for personal use, required to facilitate your learning and preparation of personal course/lecture notes, may not be shared with others without the permission of the instructor or event coordinator, and may not be published, posted, linked to, or otherwise made available online, including on social media feeds, even if those feeds are private.

Health and Safety
All York students and instructors share responsibility for the safety and well-being of the community while on York's campuses. Please continue to check YUBetter Together for the latest information on health and safety.

Student Support and Resources

To help you succeed academically, York University offers a wide range of resources and services. Everything from writing workshops and peer mentorship to wellness support and career guidance is available to fulfill our LA&PS students' needs. Explore the links below to access these on-campus resources:
- Academic Advising is available to provide students support and guidance in making academic decisions and goals.
- Student Accessibility Services are available for support and accessibility accommodation when required.
- Student Counselling, Health & Wellbeing offers workshops, resources, and counselling to support your academic success.
- Peer-Assisted Study Sessions (PASS) Program provides student study sessions for students to collaborate and enhance their understanding of course content in certain courses.

- [Student Numeracy Assistance Centre at Keele (SNACK)](#) supports students in courses involving math, stats, and Excel.
- [The Writing Centre](#) provides multiple avenues of writing-based support including drop-in sessions, one-to-one appointments, a Multilingual Studio, and an Accessibility Specialist.
- [ESL Open Learning Centre (OLC)](#) supports students with building proficiency in reading, writing, and speaking English.
- [Learning Skills Services](#) provides tips for time management, effective study and learning habits, keeping up with coursework, and other learning-related supports.
- [Learning Commons](#) provides links to supports for time management, writing, study skills, preparing for exams, and other learning-related resources.
- [Roadmap to Student Success](#) provides students with timely and targeted resources to help them achieve academic, personal, and professional success.
- [Office of Student Community Relations (OSCR) i](#)s responsible for administering the [Code of Student Rights & Responsibilities](#) and provides critical incident support.
- [goSAFE](#) is staffed by York students and can accompany York community members to and from any on-campus location, such as the Village Shuttle pick-up hub, parking lots, bus stops, or residences.

For a full list of academic, wellness, and campus resources visit [Student Support & Resources](#).