

Syllabus

**College of Business Administration
Department of Economics and Finance**



Semester: Spring 2016
Course Number and Section: ECO440X/640X
Course Title: Applied Econometrics/Econometrics
Credit Hours: 3

Classroom: ACAD 230
Meeting Times: Tuesday 7:15 to 10:00 pm
Required Texts: *Principles of Econometrics*, Hill, Griffiths, and Lim (4th Edition)
ISBN #: 0470626739. (Referred to as *PE* below)
Using GRETL for Principles of Econometrics, by Lee Adkins (4th Edition).
Free pdf download available here: <http://www.learn econometrics.com/gretl/index.html>.

Recommended Texts: *A Guide to Econometrics*, Kennedy (6th Edition). ISBN #: 1405182571
Doing Economics, by Steven A. Greenlaw (1st Edition). ISBN#: 0618379835
Prerequisite courses: BUS231 Business Statistics II or its equivalent

Instructor Information:

Name: Jay K. Walker
Office Hours: Tuesday 1-2, 3:30-5 pm; Wednesday 2-4:30, and Thursday 1-2 pm
Office Location: Bisgrove 254J
Office Phone: 716-286-8311
Faculty E-Mail: jwalker@niagara.edu

University Mission Statement:

Niagara University educates its students and enriches their lives through programs in the liberal arts and through career preparation, informed by the Catholic and Vincentian traditions.

College of Business Mission Statement:

Consistent with the goals of the university, and understanding that wealth generation emanates from business, we seek to prepare our students for productive roles in business and the community through quality teaching at the undergraduate and graduate levels, supported by our scholarly research and service.

College of Business Learning Outcomes:

1. Students will demonstrate effective presentation skills.
2. Students will demonstrate effective writing skills.
3. Students will demonstrate analytical skills.
4. Students will develop valuable employment skills through co-ops, internships, and community service.

Departmental Mission Statement:

Guided by the College of Business Administration mission, the undergraduate program creates and disseminates knowledge, fosters rich learning experiences, empowers student achievement, and inspires professional engagement in the global society.

Economics and Finance Student Learning Outcomes

1. Graduates will have effective written communication skills
2. Graduates will be effective oral communication skills
3. Graduates will be able to evaluate and understand ethical issues in business decisions
4. Graduates will demonstrate the ability to analyze information and apply critical thinking skills
5. Graduates will be proficient in using the appropriate technology and information resources for their field
6. Graduates will demonstrate knowledge of the field in their concentration or major

Course Description:

The objective of this course is to prepare students for empirical work in economics. Specifically, topics covered will include basic data analysis, regression analysis, testing, and forecasting. Students are provided the opportunity to use economic data to test economic theories. We will utilize computer software in all facets of our approach. This is believed to be a more applied course, ultimately knowing the limits of software packages and what theories mean for empirical analysis will be stressed.

Course Learning Outcomes:

Economics is a quantitative social science, and its claims can only be verified with the quantitative analysis of economic data. Econometrics is the main tool for such analysis. We will begin with a review of probability and statistics, and then we will study linear regression techniques for cross-sectional data, binary dependent variables, and instrumental variable techniques. More broadly speaking students will have the opportunity to:

1. Learn and understand how to utilize data to approach and test an economic theory
2. Better understand sources of economic data sources to test economic theory
3. Better understand how to troubleshoot datasets, economic models, and academic papers to determine if they or others have made mistakes in their analysis
4. Understand which statistical models are appropriate to use in different settings according to the nature of the question we're attempting to answer and the end user for the analysis and output
5. Better realize that economics affects every decision we make, in that all decisions are ultimately made at the margin. AKA Economics is everywhere!

Throughout we will attempt to have a critical approach, trying to assess not only the uses but also the misuses of economic data.

Assessment Measures:

Course Grading:

Mid-term exam	20%
Final exam	20%
Group presentation	5%
Homework	10%
Project	45%

Course Grading:

<u>Requirement</u>	<u>Weight</u>	<u>Course Learning Outcomes</u>	<u>CBA Learning Outcomes</u>	<u>Department Learning Outcomes</u>
Mid-term exam	20%	1,2,3,4,5	2,3	1,2,3,4,5,6
Final exam	25%	1,2,3,4,5	2,3	1,2,3,4,5,6
Group Presentation	5%	1,2,3,4,5	1,2,3	1,2,3,4,5,6
Homework/In-class assignments	10%	1,2,3,4,5	1,2,3	1,2,3,4,5,6
Project	45%	1,2,3,4,5	1,2,3	1,2,3,4,5,6

Attendance: Attendance is expected and mandatory.

Homework: These will be due throughout the semester at the dates and times assigned, **NO late work is accepted.** It is your responsibility to have your homework and other assignments to me in a timely fashion regardless of the circumstances. As attendance is mandatory and completion of homework is necessary to be able to actively participate in class discussions, homework will be due at the beginning of class on the dates I designate when work is assigned.

Make-up Exams: Make-up exams will be given only at my discretion. Examples of situations warranting a make-up exam are a serious illness or a death in the family. Written official documentation is required. You must notify me by either phone or email by the day of the exam, at the latest, to be eligible to take a make-up exam. Make up exams will be offered once a semester at a date and time TBD.

Individual Econometrics Projects

Throughout your training in economics you have been presented with theoretical or empirical relationships between economic variables. Your assignment is to construct an econometric model of a functional relation that is interesting to you, collect the relevant data, and estimate the model dealing with possible statistical problems that might arise. There are some projects that are likely to be less suitable than others, because of unavailable data or lack of interesting testable hypotheses. Therefore, to guarantee that you are on the right track with a project, you are required to submit a one to two page research proposal on or before February 16th.

Your proposal should (1) identify the topic you will investigate and general questions to be addressed, (2) sketch a tentative model to be estimated, including the relevant variables in the model, (3) cite at least two papers that present a similar econometric model, and (4) identify your data sources, the nature of the sample (time series, cross section, panel), and the number of observations. In your proposal be clear what your units of measurement will be. For example, if you were to propose a model of wage determination, would you observe wages of individuals at a point in time, or would you model average wages in the US over time, or possibly average wages of states observed across states? Clear thinking about this issue is vital to developing a reasonable econometric model.

Once we have agreed on a project, you should collect data and begin estimation. You will probably want to try several alternative specifications of your model and undoubtedly encounter various statistical problems. An important part of the project is the testing and treatment of these various econometric problems, using procedures presented in the course. You should document your use of these procedures by submitting the relevant computer output with your paper.

The write-up summarizing your project should follow the format of empirical articles in economics journals. Typically, these papers include:

1. Overview of the research question; statement of objectives, hypotheses to test.
2. Presentation of theory and review of relevant theoretical work.
3. Discussion of related empirical work in the area; critique of this work and statement of how your research is a contribution.
4. Specification of model to be estimated; variable definitions; data sources.
5. Presentation of estimation results; estimated equations and summary statistics; diagnostic test statistics; discussion of tests and procedures for dealing with econometric problems
6. Substantive conclusions; implication of your results for theory and policy; comparison with other empirical results.

Your final paper is due on Tuesday April 26th in class. Be sure to include supporting computer output, accompanied by emailing me the underlying data. It should be 8 to 12 pages long double-spaced in Times New Roman font (640 students 14 to 16), not counting tables and exhibits (which will follow the works cited) presented following the text with citations in commonly accepted APA format. Please note it will likely require additional pages for you to complete this project effectively, but these page counts are likely the minimum to reasonably cover the topic. I would like at least ten articles included in the works cited.

The breakdown of the grade for your final project (45% of total) is as follows:

Proposal (5%) – Due in class February 16th with an accompanying 3-5 minute presentation of your plans.

Oral Presentation of final paper (10%) – I will grade this out of a possible 80% if you choose to present this as part of a recorded PowerPoint presentation. I will grade out of possible 100% if you participate in the NU research forum and 110% if you participate in the WNY Business Consortium, although we must agree you are ready to participate in the Business Consortium (115% if you do both).

Referee reports (5%) – Two weeks prior to the final, an example will be given

Written paper (25%) – Due in class 4/28/15, an evaluation rubric will be made available as a guide as we draw closer to the due date. Follow the broad guidelines mentioned above and listed in the course notes.

Initial results and literature review assignments will count as part of the homework grade.

You should form groups of 3 members with one group having 2 members. You will select a refereed journal article to present in class from the list of approved articles at the end of the syllabus. You should plan on between 10-12 minutes of material discussing their research design, research question, data utilized, summarizing and presenting the results. The group should be prepared to field questions from the audience.

Niagara University business students are asked to use the APA citation style. We recommend the Cornell University guide which can be accessed at:

<http://www.library.cornell.edu/resrch/citmanage/apa>

We encourage you to use the “specific parts of a source” format found in the Cornell guide which includes author, year and page number in parentheses, i.e. (Smith, 2005, p. 42).

At the end of the Cornell APA style guide are formats for web sites, blogs, etc.

Please note that the APA style also requires a bibliography “Reference list” at the end of the paper in addition to internal parenthetical references.

Grading Methodology:

A+: 97 and above	C+: 77-79
A: 93-96	C: 74-76
A-: 90-92	C-: 70-73
B+: 87-89	D: 60-69
B:84-86	F: 60 and below
B-: 80-83	

Statement on Academic Integrity:

Academic honesty – being honest and truthful in academic settings, especially in the communication and presentation of ideas – is required to experience and fulfill the mission of Niagara University. Academic dishonesty – being untruthful, deceptive, or dishonest in academic settings in any way – subverts the university mission, harms faculty and students, damages the reputation of the university, and diminishes public confidence in higher education.

All members of the university community share the responsibility for creating conditions that support academic integrity. Students must abstain from any violations of academic integrity and set examples for each other by assuming full responsibility for their academic and personal development, including informing themselves about and following the university's academic integrity policy.

Violations of academic integrity include but are not limited to the following categories: cheating; plagiarism; fabrication; falsification or sabotage of research data; destruction or misuse of the university's academic resources, alteration or falsification of academic records; academic misconduct; complicity; and copyright violation. This policy applies to all courses, program requirements, and learning contexts in which academic credit is offered, including experiential and service-learning courses, study abroad programs, internships, student teaching and the like. Please refer to the undergraduate catalogue for Niagara University's policy on academic integrity or access the policy online, www.niagara.edu/academicintegrity.

Inclusivity, Diversity & Support for Students at Niagara University

Niagara University supports a learning environment that fosters inclusiveness where diversity is respected and valued. It is expected that students in this class will respect differences and develop an understanding of how other people's perspectives, behaviors, and worldviews may be different from their own.

Students are always encouraged to meet with faculty as early as possible in the semester to discuss their needs or concerns. Students may also seek additional assistance from a variety of resources available on campus:

Office of Academic Support – Seton 1st floor, 716-286-8072, www.niagara.edu/oas
Provides peer tutoring, Writing Center, reading assistance, and study skills training.

Office of Disability Services – Seton 1st floor, 716-286-8072, www.niagara.edu/oas-disability-services
Provides academic accommodations for students with documented disabilities, and assists with access, evacuation, and emergency medical notifications (i.e., seizure disorders).

Office of the Dean of Students – Gallagher 111, 716-286-8405
Provides a wide range of support services including Counseling Services, Health Services, Multicultural Affairs, Residence Life, and Veterans Services. For a full explanation of services and direct contact information please go to: www.niagara.edu/student-affairs www.niagara.edu/veterans. The Dean of Students serves as deputy Title IX Coordinator who advocates for students regarding harassment and sexual misconduct issues, and can offer information regarding students' rights and responsibilities under the student code of conduct.

Extra credit: The only way you can gain credit other than the items specifically listed in the syllabus is by signing up for a Duolingo account and working on learning a language. Share your progress with me via this link: <https://www.duolingo.com/o/ubxpbj>. You must use this link to sign up for the classroom and it is your responsibility to sign up correctly. I will give extra points to those with the most experience points (up to 2.5 percentage points), and for those of you who maintain a streak of daily participation (10 XP or more) throughout the semester. You can follow me with my user name jaykody, I am currently working on Spanish and German.

Papers to select from for Group Presentation

Angrist, J. and Evans, W. 1998. Children and Their Parents' Labor Supply: Evidence from Exogenous Variation in Family Size. *The American Economic Review*, 88(3), 450-477.

Angrist, J. D. and Krueger, A. B. 1991. Does Compulsory School Attendance Affect Schooling and Earnings? *Quarterly Journal of Economics*, 106(4):979-1014.

Black, S. E. (1999). Do Better Schools Matter? Parental Valuation of Elementary Education. *The Quarterly Journal of Economics*, 114(2):577-599.

Bleakley, H. and Chin, A. (2004). Language Skills and Earnings: Evidence from Childhood Immigrants. *Review of Economics and Statistics*, 86(2):481-496.

Duflo, E. (2001). Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment. *The American Economic Review*, 91(4), 795-813.

Hussey, A., Nikolsko-Rzhevskyy, A., and Walker, J. 2014. AIDing contraception: HIV and recent trends in abortion. *Applied Economics*, 46(15):1788-1803.

Jetter, M. and Walker, J. 2015. Game, set, and match: Do women and men perform differently in competitive situations? *Journal of Economic Behavior & Organization*, 119: 96-108.

Kearney, M.S. and Levine, P.B., 2014. Media Influences on Social Outcomes: The Impact of MTV's 16 and Pregnant on Teen Childbearing. *The American Economic Review*, 105(12): 3597–3632.

Krueger, D. and Card, A. B. 1994. Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania. *The American Economic Review*, 84(4) 772-793.

Miguel, E. and Kremer, M. 2004. Worms: identifying impacts on education and health in the presence of treatment externalities. *Econometrica*, 72(1):159-217.

Munshi, K. 2003. Networks in the modern economy: Mexican migrants in the US labor market. *Quarterly Journal of Economics*, 118(2):549-599.

Walker, J. 2014. Silence is Golden: Railroad Noise Pollution and Residential Home Values. Working paper (I'll furnish most recent version).

Econometrics Walker Spring 2016 - Tentative Schedule
Content subject to revision, exam and paper due dates will not change

Date	Weekday	Description	Econ/Fin Student Learning Outcomes
1/19/2016	Tuesday	Intro/Syllabi/GRETL/Review Statistics & Probability	1,2,3,4,5,6
1/26/2016	Tuesday	Ch. 2 Simple Regression/Ch. 3 Interval Estimation & Hypothesis Testing	1,2,3,4,5,6
2/2/2016	Tuesday	Ch. 4 Prediction, goodness of Fit and Modeling Issues/Ch. 5 Multiple Regression	1,2,3,4,5,6
2/9/2016	Tuesday	Ch. 4 Prediction, goodness of Fit and Modeling Issues/Ch. 5 Multiple Regression	1,2,3,4,5,6
2/16/2016	Tuesday	Research Proposal due/Ch. 6 Inference in Multiple Regression	1,2,3,4,5,6
2/23/2016	Tuesday	Ch. 6 Inference in Multiple Regression/Review	1,2,3,4,5,6
3/1/2016	Tuesday	Spring break	1,2,3,4,5,6
3/8/2016	Tuesday	Mid-term exam & Ch.6 Inference in Multiple Regression	
3/15/2016	Tuesday	Ch. 7 - Using Indicator Variables/Literature Review draft due	1,2,3,4,5,6
3/22/2016	Tuesday	Ch. 7 - Using Indicator Variables/Ch. 8 - Heteroskedasticity	1,2,3,4,5,6
3/27/2015	Friday	Ch. 8 - Heteroskedasticity/Ch. 11. Simultaneous Equations Models	1,2,3,4,5,6
3/29/2016	Tuesday	Ch. 11 Simultaneous Equations Models/Ch. 12 Intro to Time Series/Initial Results for paper due	1,2,3,4,5,6
4/5/2016	Tuesday	Ch. 12 Intro to Time Series/Ch. 15 Panel Data	1,2,3,4,5,6
4/12/2016	Tuesday	Ch. 15 Panel Data; Paper draft due to referees	1,2,3,4,5,6
4/16/2016	Saturday	<i>WNY Business Consortium</i>	1,2,3,4,5,6
4/19/2016	Tuesday	Ch. 16 - Qualitative & Limited Dependent Variable Models/Referee reports due to authors	1,2,3,4,5,6
4/26/2016	Tuesday	More Ch. 16/Review for final exam/ Final Paper due	1,2,3,4,5,6
4/29/2016	Friday	<i>NU Research Forum</i>	1,2,3,4,5,6
5/10/2016	Tuesday	Final Exam 8:10 to 10:00 pm, normal classroom	1,2,3,4,5,6