Economics 416
Econometrics
Fall 2011

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Office Hours:
T & TH 2:00 to 4:00
and by appointment

This course is required for the economics major and fulfills an elective requirement for the minor. It also meets the requirements for the Quantitative Reasoning (QR) Linfield Curriculum mode of inquiry. Enrollment is open to students who have completed ECON 411 and 412.

Required Text

Studenmund, A.H., Using Econometrics: A Practical Guide 6e, The companion website (http://wps.aw.com/aw_studenmund_useecon_6/) has student resources including an EViews statistical software guide and data sets that you will use during lab sessions.

Software

The econometrics software package for this class is EViews 7. You may access it from three on-campus labs – the econ lab on the third floor of Day Hall, the business lab on the second floor of Day Hall, and the Renshaw Hall lab. You may wish to purchase a copy of EViews 6 Student Version or EViews 7 to load on your personal laptop/desktop. To do so, consult your instructor about possible discounts. Please note that the program is Windows based and will not operate on a Mac unless it is a dual boot machine.

Course Learning Goals

As an elective course for the economics major and minor and a required course for the major, this course has the following learning goals to be achieved as indicated.

- Students will develop command of existing economic knowledge by completing readings from the course text, participating in discussions about readings from the course text, completing homework assignments, participating in lab sessions, completing a midterm exam, and completing an econometrics project.

- Students will utilize economic knowledge to explain economic issues by participating in discussions about readings from the course text, completing homework assignments, participating in lab sessions, completing a midterm exam, and completing an econometrics project.

- By completing an econometrics project, students will create new economic knowledge.
As a course satisfying the Quantitative Reasoning mode of inquiry for the Linfield Curriculum, this class has the following learning goals.

- Students will pose questions involving quantitative relationships in real-world contexts by means of numerical, symbolic, and/or visual representations.
- Students will analyze problems by discussing models; making appropriate assumptions; and deducing consequences or making predictions and understand the uses and constraints of various representations of quantitative information.
- Students will communicate and critique quantitative arguments.

Course Overview

The course is divided into three blocks as illustrated in the course outline below. We will try to adhere to this outline, but adjustments may be necessary. The first block covers the basics of econometrics providing an overview of the regression model and presenting issues associated with ordinary least squares, the classical model, hypothesis testing, and model specification. The second, very brief, yet important block covers topics associated with managing your econometrics project. The third block covers the diseases of regression analysis, panel models, dummy dependent variable models, time series and simultaneous equations models. Throughout the second and third blocks, students will be working in teams on their econometrics projects. This work will include choosing a topic, carrying out a literature review, specifying a model, collecting data, performing statistical analysis, and writing up a research report.

Discussion Questions and Homework

For each daily reading assignment, the instructor will provide discussion questions. These questions will identify issues to be considered during class discussion of the readings. You should use these questions to help prepare for class and should come to class prepared to engage in discussion about them. Selected discussion questions and questions from the end of chapter problems in the text will be periodically assigned as homework problems. Your homework answers must be written either in pencil (not ink) or word processed. Graphs must be neatly drawn and properly labeled. The homework will be due at the beginning of the class period for which they are assigned.

Friday Labs and Project Meetings

On most Friday’s during the semester we will hold lab sessions in Renshaw Hall computer lab. In these labs we will work with datasets and EViews exploring the applied dimensions of the topics covered in class.

On selected Fridays you and your project partner will meet with the instructor to discuss and review progress on your econometrics project.

Midterm Exam

There will be an open book, open note, take-home exam at the end of the first block covering the material in Chapters 1 through 7 of the text.
Econometrics Project

Throughout the second and third blocks, you will be working in teams on your econometrics projects. This work will include choosing a topic, completing a literature review, specifying a model, collecting data, performing statistical analysis, and writing up a research report. The report will be due during finals week. You are responsible for identifying your partner for this project. Your project grade will have two components. The first component will be a single grade applying to both team members based on the relative quality of your team’s work process and research report. For the second component, you and your team member will receive separate grades based on your relative performance in the project presentations. As part of the evaluation for the first component, the instructor will consider your team’s self evaluation. The self evaluation will be completed using the rubric provided below which is to be turned in along with your research report.

Reflective Essay

During finals week you are asked to submit a reflective essay in which you provide an analysis of how you have met the course learning goals. The reflective essay assignment and grading rubric used to evaluate it appear in this syllabus below. It will be graded on a pass/fail basis.

Evaluation Procedures

Progress in achieving the course learning goals will be determined by the quality of your work relative to the work of your class peers as follows. Students may request an instructor-evaluation of their progress at any time during the semester.

Relative Quality of Written Answers to Homework Questions 25%
Relative Quality of Midterm Exam 25%
Relative Quality of Regression Project
  Work Process and Research Report (Joint Component) 30%
  Presentation (Individual Component) 10%
Relative Quality of Reflective Essay (Pass/Fail) 10%
100%

The grade percentile/letter grade scale for all graded work is as follows.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>90-100%</td>
<td>A-range</td>
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<tr>
<td>80-89.99%</td>
<td>B-range</td>
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<tr>
<td>70-79.99%</td>
<td>C-range</td>
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<tr>
<td>60-69.99%</td>
<td>D-range</td>
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<tr>
<td>0-59.99%</td>
<td>F-range</td>
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Late Assignments, Academic Dishonesty, Cell Phones/PDAs/Laptops

While attendance will not be monitored in a formal way, the instructor will notice who attends class regularly and who does not. Students who have good attendance histories learn more and perform better in this class than do those students whose attendance histories are spotty. Unless you are ill, have a personal or family emergency, or are participating in a college sponsored event, you should attend class.
Late assignments will be accepted without penalty as determined at the instructor's discretion only if you have previously informed the instructor of a legitimate excuse for doing so in person, via email, via phone, or in a phone message (NOTE: email and phone messages must be left prior to the starting time of class when the assignment is due). Legitimate excuses for absence are absolutely limited to illness, personal and family emergencies, and participation in college-sponsored events. You must turn in your own assignments. The instructor will not accept your assignment if it is turned in by another student unless you have previously arranged to do so.

College policy concerning academic dishonesty will be observed in this course. Students should consult the Linfield College Course Catalog for information about academic dishonesty and the disciplinary actions that may be invoked.

If you bring cell phones and other personal data devices (including laptops) with you to class, you must turn them off before class begins and they must remain off for the duration of the class period unless notified otherwise by the instructor. The first violation of this policy will result in a warning. If a second violation occurs, you will be asked to excuse yourself from the class for the duration of that class period. Third and subsequent violations will result in a lowering of your course grade as determined at the instructor’s discretion.

**College Disability Statement**

Students with disabilities are protected by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. If you are a student with a disability and feel you may require academic accommodations contact Cheri White, Assistant Director of Learning Support Services (LSS), within the first two weeks of the semester to request accommodations. LSS is located in Walker 126 (503-883-2444). We also recommend students communicate with their faculty about their accommodations and any special needs an instructor should be aware of.

**Course Outline**

**I. Regression Analysis, Hypothesis Testing, and Model Specification**

M 8/29-T 8/30: Ch. 1
W 8/31-TH 9/1: Ch. 2
F 9/2: Lab
T 9/6: Homework Discussion
W 9/7: Ch. 3
TH 9/8-T 9/13: Ch. 4
F 9/9: Lab
W 9/14: Faculty Lecture 7:30 p.m. Riley 201
TH 9/15: Homework Discussion
Course Outline (continued)

F 9/16: Lab

M 9/19-W 9/21: Ch. 5

TH 9/22-T 9/27; Ch. 6

F 9/23: Lab

W 9/28: Homework Discussion

TH 9/29-T 10/4 Ch. 7

F 9/30: Lab

W 10/5: Homework Discussion

TH 10/6: Midterm Exam Review; Exam Distribution

F 10/7: Lab

M 10/10: Midterm Exam Due

II. Your Regression Project

T 10/11-W 10/12: Ch. 11

III. Regression Diseases, Panel Data Models, Dummy Dependent Variable Models, Time-Series and Simultaneous Equations Models

TH 10/13-M 10/17: Ch. 8

F 10/14: Lab

T 10/18-TH 10/20: Ch. 9

F 10/21: Lab

M 10/24: Homework Discussion

T 10/25-TH 10/27: Ch. 10

F 10/28: Lab

M 10/31-T 11/1: Ch. 16

W 11/2 Homework Discussion

TH 11/3-M 11/7: Ch. 13
Course Outline (continued)

F 11/4: Lab

T 11/8-TH 11/10: Ch. 12 or Ch. 14

F 11/11: Lab

M 11/14-TH 11/17: Work on Regression Projects

M 11/28: First Draft of Reflective Essay Due (optional)

M 11/28-TH 12/8: Regression Project Presentations

W 12/14, 1:00 p.m.: Regression Project and Reflective Essay Due

Selected Links to Online Sources for Literature Reviews

EconLit is a searchable database for economics journal articles printed from 1969 to present. It can be accessed through Nicholson Library’s webpage by choosing “Research Databases” followed by “Business and Economics” followed by “Economics” followed by “EconLit”.

Google Scholar http://www.scholar.google.com

Selected Links to Online Data Sources for Econometrics Projects

Resources for Economists on the Internet http://rfe.org has a data link to U.S. and international macro, sectoral, and financial data.

Economagic http://www.economagic.com has links to U.S. and some international macro, sectoral, and financial data.

WebEC http://www.helsinki.fi/Web.Ec has links to a variety of U.S. and international data.

Linfield Economics Home Page http://www.linfield.edu/economics/links.html has links to a selected databases.

IFS Online accessed through the library’s webpage at <Research Databases, Business and Economics, Economics>.

The Delta Cost Project http://www.deltacostproject.org is a higher education finance database.

IPEDS http://www.nces.ed.gov/ipeds contains U.S. Education Department data on colleges and universities.

DataLab http://www.nces.ed.gov/datalab is a data engine for the U.S. Department of Education
ECON 416 - Regression Project Team Self-Evaluation Rubric

Rate your team’s performance on a 1 to 4 scale (lowest to highest) in each of the following categories by circling the appropriate level. For each provide a one paragraph statement identifying most important things you could have done to improve your work in that category.

Choice of Topic - The topic was clearly identified, well thought out, and doable.

4 3 2 1

Literature Review – The review was drawn from reputable sources, was balanced in the mix of sources, and included refereed journal articles.

4 3 2 1

Model Specification – The model’s specification was theoretically based and appropriate efforts to avoid data mining were made.

4 3 2 1

Data Collection – The data set was obtained from reputable sources, provided ample degrees of freedom, was carefully inspected and cleaned, and contained all the variables theoretically identified in the model specification.

4 3 2 1

Statistical Analysis – Appropriate statistical estimation techniques and tests were implemented.

4 3 2 1

Research Report – The research report followed the standard format including all relevant sections, was well written, and provided good explanations of the model’s specification, hypotheses to be tested, estimation techniques, statistical tests, and results.

4 3 2 1
Instructions: Please complete a three to five page essay that persuasively argues how you have met the learning goals for this course. As noted on the course syllabus these learning goals are:

- Developing Command of Existing Economic Knowledge
- Utilizing Economic Knowledge to Explain Economic Issues
- Displaying the Ability to Create New Economic Knowledge

In order to do so you should identify one or more topics/issues from the list below and provide a clear, concise explanation of the topics/issues that is so well constructed the instructor is persuaded that you have indeed met the learning goals.

The essay must be completed in Word and should be double-spaced and well written (no spelling errors, use of proper grammar, sentence structure, paragraphs, etc.).

The essay will be evaluated using the attached rubric. Your essay is due both in written form and electronically as a Word document at jsummer@linfield.edu on the day and time of the final exam scheduled for this class.

List of Topics/Issues for the Reflective Essay

- Ordinary Least Squares: Estimating single and multiple variable models with OLS
- The Classical Model: Assumptions, the sampling distribution of $\hat{\beta}$, properties of OLS estimators
- Hypothesis Testing: What it is, how to do it, the t-test, and the F-test
- Model Specification: Omitted variables, irrelevant variables, functional forms, dummy variables, lagged dependent variables
- Multicollinearity: What it is, its causes, consequences, and cures
- Serial Correlation: What it is, its causes, consequences, and cures
- Heteroskedasticity: What it is, its causes, consequences, and cures
- Types of Models: panel models, dummy dependent variable models, time-series models, simultaneous equations models
- Your econometrics project
# ECON 416
Reflective Essay Rubric

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<thead>
<tr>
<th>YES (Pass)</th>
<th>NO (Fail)</th>
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<td>For the following learning goals the student provides a clear, concise explanation of selected topic(s)/issue(s) from the assigned list that is so well constructed the instructor is persuaded the learning goal has been met.</td>
<td></td>
</tr>
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