New Course Request

Indiana University

Indianapolis Campus

Check Appropriate Boxes: Undergraduate credit ☐
Graduate credit ☑
Professional credit ☐

1. School/Division Liberal Arts
2. Academic Subject Code Econ-E

3. Course Number 573 (must be cleared with University Enrollment Services)
4. Instructor TBA

5. Course Title ECONOMETRICS II:

Recommended Abbreviation (Optional) ECONOMETRICS II:

(Limited to 32 Characters including spaces)

6. First time this course is to be offered (Semester/Year): spring 2010

7. Credit Hours: Fixed at 3 or Variable from ______ to ______

8. Is this course to be graded S-F (only)? Yes ☑ No ☐

9. Is variable title approval being requested? Yes ☑ No ☐

10. Course description (not to exceed 50 words) for Bulletin publication: Estimation and inference in linear regression model, basic asymptotic theory, heteroskedasticity, measurement error, generalized least squares, instrumental variable model, maximum likelihood estimation, generalized method of moments, qualitative response models.

11. Lecture Contact Hours: Fixed at 3 or Variable from ______ to ______

12. Non-Lecture Contact Hours: Fixed at ______ or Variable from ______ to ______

13. Estimated enrollment: 5 of which 100 percent are expected to be graduate students.

14. Frequency of scheduling: annual Will this course be required for majors? Yes ☑ No ☐

15. Justification for new course: Required for new PhD in Economics

16. Are the necessary reading materials currently available in the appropriate library? Yes ☑ No ☐

17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant

19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by:

Date Department Chairman/Division Director

Date 1-15-10

Dean of Graduate School (when required)

Date

Approved by:

Dean

Date 2/24/10

Chancellor/Vice-President

Date

University Enrollment Services

Date

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

University Enrollment Services Final-White; Chancellor/Vice-President-Blue; School/Division-Yellow;
Department/Division-Pink, University Enrollment Services Advance-White

Recent
ECONOMETRICS II: SYLLABUS
SINGLE EQUATION ECONOMETRIC MODELS

Instructor: xxxx
Office: xxxx
Phone: xxx-xxx-xxxx
Email: xxxx@iupui.edu
Website: http://mypage.iu.edu/~xxx
Office Hours: xxx, or by email appointment

Course Description

E 573 is the second semester of the core econometrics sequence, its purpose is to develop methods used for empirical implementation and validation of economic relationship. It introduces students to the linear regression model and discuss statistical inference under standard assumptions, then the majority of the course is devoted to implications of potential relaxations of these assumptions and derivations of econometric remedies. It will also consider inference in certain nonlinear regression models and provide general treatment of maximum likelihood estimation techniques and generalized method of moments.

Biweekly problem sets are important parts of the course. Some problem sets will require the use of a matrix-oriented programming language like MATLAB or GAUSS. An introduction session to MATLAB/GAUSS will be given in the second or third week of the semester.

Learning Objectives

On completing this course, the learning outcomes are such that students will be able to:

1. Understand basic theoretical asymptotic properties of various estimators and testing procedures.
2. Understand standard econometric remedies for potential violations of classical assumptions.
4. Have a firm understanding of an array of econometric models including discrete choice models and Tobit models. This understanding should include the theoretical underpinnings, estimation, and interpretation.
5. Be able to apply maximum likelihood models and GMM models, including discrete choice models, appropriately to solve empirical applications.
6. Develop a portfolio of MATLAB or GAUSS code that you can return to in the future as you encounter empirical problems.
Prerequisites

Students are assumed to be familiar with the materials covered in E 571. These include probability theory, distribution theory for random variables, and statistical inference theory of estimation and testing at the level of Casella and Berger’s book on Statistical Inference, Amemiya’s book on Introduction to Econometrics and Statistics, and Greene’s book on Econometrics Analysis.

Textbooks and Readings

I will be drawing materials from the following four books, all of them are optional.


I will also use lectures notes in class. The lecture notes covering core material will be available in OnCourse as the class progresses.

Here is a list of supplementary textbooks you may find useful.


Grading Policy

Grades will be based on class attendance and participation (5%), six problem sets (5% each and 30% total), a midterm exam (25%), and a final exam (40%). To assess your participation, I will look for evidence that required readings are done before the lecture and that students are actively engaged in that discussion.

Attendance is required. Students who are ill should inform me in advance that they will miss class except in cases of emergency. Absences lasting more than one class should be documented by a physician.

Make-up exams will be offered only for illness or emergency documented by a physician or other reliable source.

Grading Scale
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<thead>
<tr>
<th>Letter Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
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<tr>
<td>A</td>
<td>93-96.99</td>
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<tr>
<td>A-</td>
<td>90-92.99</td>
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<tr>
<td>B+</td>
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<td>80-82.99</td>
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<td>C+</td>
<td>77-79.99</td>
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<tr>
<td>C</td>
<td>73-76.99</td>
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</tbody>
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**Oncourse and Email**

All the course announcements and related materials (problem sets and solutions, data sets, exams and answers, lecture notes, etc.) will be posted on the OnCourse website according to the schedule, you should check it periodically to get updated information about the course.

I will also use email to distribute information about the course. If you are not getting your email, you need to make sure that I have your correct email address. I am not responsible for your failure to receive course emails.

**Academic Integrity**

Students must follow the Code of Student Rights, Responsibilities, and Conduct (http://life.iupui.edu/rights/docs/CodeofConduct.pdf).

Penalties can be applied for cheating, fabrication, plagiarism, or sabotaging the work of other students. In particular, plagiarism occurs when you adopt, reproduce, or paraphrase the ideas, words, or statements of another person without appropriate acknowledgment. Quotes and paraphrases should include a complete reference. Facts, statistics, and the like should include references unless the information is common knowledge. When in doubt about any of these policies, ask the instructor.

Cheating or plagiarism on any assignment or exam will result in a failing grade for that assignment and, at the instructors discretion, depending on the nature of the violation, a failing grade for the course. The misconduct will also be reported to the Dean of Students who will decide on any further appropriate action.

**Americans with Disabilities Act**

If you need any special accommodations due to a disability, please contact Adaptive Educational Services at (317)-274-3241. The office is located in Joseph T. Taylor Hall (UC), Room 137.

**Computer Activity**

Students should be advised that, ultimately, you are responsible for activity on your computer accounts. Please be careful to log off public computers whenever the computer will be unattended and do not leave laptops unattended.

**Course Outline**

1. Review of Classic Least Squares
• Cameron and Trivedi, Ch. 4.1 - 4.4

• Wooldridge, Ch. 3

• Amemiya, Ch. 1

2 Introduction to Asymptotic Theory

• Cameron and Trivedi, Appendix A

• Wooldridge, Ch. 4

• Amemiya, Ch. 3.1 - 3.4

3 Large Sample Estimation and Inference Results for Linear Regression Model

• Wooldridge, Ch. 4.2

• Amemiya, Ch. 3.5

4 Heteroskedasticity, Generalized Least Squares, and Feasible Generalized Least Squares

• Cameron and Trivedi, Ch. 4.5

• Wooldridge, Ch. 4, Ch. 6

• Amemiya, Ch. 6

5 Measurement Error in Linear Regression Model

• Cameron and Trivedi, Ch. 26

• Wooldridge, Ch. 4.4

6 Instrument Variables and Generalized Method of Moments

• Cameron and Trivedi, Ch. 4.8 - 4.9, Ch. 6

• Wooldridge, Ch. 5, Ch. 14

7 Introduction to Maximum Likelihood Methods

• Cameron and Trivedi, Ch. 4

• Wooldridge, Ch. 12, Ch. 13

• Amemiya, Ch. 4

8 Maximum Likelihood Application: Discrete Response Models

• Cameron and Trivedi, Ch. 15, Ch. 14

• Wooldridge, Ch. 15
• Amemiya, Ch. 9

9 Tobit and Selection Models
• Cameron and Trivedi, Ch. 16
• Wooldridge, Ch. 16, Ch. 17
• Amemiya, Ch. 10

Please Note:
Once it is definitely determined who will teach this course, we will fill in specifics such as due dates and office hours.

Updated: May 24, 2010