Instructor
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TA: Feng-An Yang
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Lecture time: Tuesday and Thursday 10:20-11:50am (102 Kottman)
Lab time: Thursday 9:00-9:55am (005 AA)
Office hours for Instructor and TA will be announced on Canvas.

Course description
This course introduces students to the econometric models, estimation procedures, and model applications. Topics include simple and multiple regression, regression with dummies, multicollinearity, heteroskedasticity, autocorrelation, specification, and selected advanced topics.

Course description from Bulletin
Application of econometric and time series method to the analysis of problems in agricultural, environmental, and development economics. (4 units)
Prereq: 4001 (500) or Econ 4001 (501), and 2005 (205) or Stat 1430 (133). Not open to students with credit for 701.

Course topics outline
Course topics will be (W# refers to chapter # in Wooldridge):
Econometrics and Econometric Data W1
Simple regression W2
Multiple regression W3
Multiple regression: inference W4
Multiple regression: asymptotics W5
Multiple regression: further issues W6
Regression with dummies W7
Heteroskedasticity W8
Specification and data issues W9
Panel data models W13
Advanced panel data models W14
Instrumental variables W15
Probit and logit models W17
These course topics will be covered roughly one topic per week.

**Textbooks**

Required textbook:

Reference books:
Baum, Christopher F. An Introduction to Modern Econometrics Using Stata, Stata Press, 2006.

**Course overview**

Class content and structure: The course will cover topics such as simple and multiple regression, regression with dummies, multicollinearity, heteroskedasticity, autocorrelation, specification, and selected advanced topics. For each topic, I have prepared lectures discussing model features, assumptions, and examples of how the model can be applied and assumptions can be tested. There will also be labs to practice estimating models with Stata programs.

Mid-term and final exam: There will be one midterm and one final exam in class, which will include model overview questions and software application questions.

Homework assignments: Homework assignments will include a combination of model questions, applications and software programming.

**Course objectives**

The course goals and objectives are the following:

- To introduce you to econometrics models and various model assumptions
- To develop your skills of selecting and estimating an econometric model

**Student learning outcomes**

Upon completion of this course, you will be able to:

- Identify and explain regression econometric models and their assumptions
- Select and estimate an appropriate econometric model and explain your results
- Apply econometric models to particular problems

**Grading**

There will be one mid-term, a final exam and 5 homework assignments.
Schedule/dates of mid-term and homework assignments are temporary and subject to change.

Midterm exam  25%  Oct 5 in class
Final exam    25%  December 8, 10:00-11:45am
Homework assignments  50%  due Sept 14, Sept 28, Oct 26, Nov 9, Nov 30 in class.

Grades will be assigned according to the OSU standard grading scheme:

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<th>Grade</th>
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<td>A</td>
<td>93 – 100</td>
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<td>A-</td>
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<td>B+</td>
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Course policies

- Class materials and access. Class materials, grades, announcements, and relevant information will be posted on Carmen (Canvas). You are expected to check Carmen frequently.
- Academic disability. If you have a documented disability that requires academic accommodations and have been certified by the Student Life Disability Services, please let know as soon as possible and I will work with you to accommodate your request.
- Make up exams: a make-up mid-term or final exam will be given if you miss the exam for a university-accepted reason and provide appropriate documentation.
- Submission of assignments. All assignments must be submitted on time (in class), but I can give you an extension until 5pm on the next day with a 10% grade penalty. After that, no assignments will be accepted.
- Class preparations. You are expected to learn and know the material that is covered and you are expected to come to class prepared to participate in our lectures and discussions.
- Academic integrity. I will enforce the official university regulations on cheating and plagiarism, according to the University’s Code of Student Conduct.
- Group work and student collaborations. You may discuss your assignment with other students in the class, but you are expected to submit your own assignment that is distinct from that of your classmates.

Thank you for taking this course. I look forward to a productive semester.