Kalamazoo College
Department of Economics and Business

Econ 360: Econometrics
Spring 2017, March 27th – June 07th

Instructor Information:

Sining Wang, PhD
Office: Dewing Hall 302
Office Hours: 3:00 PM - 5:00 PM, Tue&Thur, or by appointment
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Class Details:

Classroom: Dewing Hall 307 (Computer Lab)
Meeting Time: 2:45 PM - 4:00 PM, Monday, Wednesday & Friday

General Overview:

In this course, we will learn about how to PLAY with the data in quantitative research. We will study several basic topics in econometrics, including *the simple linear regression model, multiple regression model, interval estimation, hypothesis testing, dummy variables, heteroskedasticity, simultaneous equations models*, and *regression with time-series data*. This course emphasizes on both the theoretical and the practical aspects of statistical analysis, focuses on skills for estimating econometric models of various kinds. By the end of this term, you will develop a solid theoretical background in introductory level econometrics. You will also gain the ability to implement the learned techniques in empirical studies.

Textbook:

- Principles of Econometrics 4th edition, by Hill, Griffiths, and Lim (**required**).

Structure of Course:

- **This** course emphasizes on both the theoretical and the practical aspects of econometrics. Below is the course structure in most weeks.

• **On Mondays**, we will start with lecture-based class and learn about the theoretical side (usually focus on mathematical and statistical knowledge) of that week's material. I will give you the weekly study guide every Monday.

• **On Wednesdays,** we will have a combination of lecture/exercises based class and learn about how to use STATA to do data analysis. Unless you have strong preference in using other software (i.e., R, MATLAB, SASS, etc.), all students are required to learn use STATA in this class.

• **On Fridays,** we will start with a weekly quiz (approximately 10 mins - 15 mins) based on the materials we learned. Most of the quizzes will be closed notes, math intensive, and focus on the underlying theories. Following the quiz, we will have a weekly lab project practice. All the files for class are located on moodle. You may work with one partner together in classroom on Friday. Based on the data and weekly topic, you will write a lab project report (as a weekly assignment). You will see more detailed instructions in class. Most of the times you will not have enough time to finish the report in class. The lab project report is due on the Monday of the week after it is assigned. You will upload this assignment to Moodle no later than 11: 59 pm on Monday. Group-study is always encouraged, but each student must submit **individual effort work** (with only one name on it). **Late homework will NOT be accepted** unless under very special circumstances.

• **Take-home exam:** The final exam will be a take-home practice. It will be a combination of theoretical analysis and regression practice.

Evaluation:

An Individual's performance will be evaluated according to the following criteria and percentages.

- Weekly in-class quiz 35%
- Weekly lab practice and report 25%
- Final Exam (take-home) 40%

Grading Scale:

100% — 90%	A	69% —65%	C+
89% — 85%	A-	64% —60%	C
84% — 80%	B+	59% —55%	C-
79% —75%	B	54% —50%	D
74% —70%	B-	50% and below	F

Academic Integrity:

Academic misconduct in any form is in violation of the Student Code of Conduct at Kalamazoo College and will not be tolerated. This includes, but is not limited to: copying or sharing answers on tests, plagiarism, and having someone else do your academic work. Any violation of the academic integrity policy will result in failure of the course and will likely be referred to the Academic Misconduct

Hearing Board for further sanction. Please see the Student Code at https://reason.kzoo.edu/studev/stuconduct/ for more details and a full explanation of the Academic Misconduct policies. With respect to homework assignment and reviewing for exams, working together in a small group can be very helpful in terms of learning process. However, each person is still responsible for submitting their own (unique) work. I urge you to attend to the class in a regular manner. Ambiguity in academic integrity policies is not an excuse for a violation. If you have any questions about how the policy applies to specific scenarios, please discuss them with me.

Student with Disabilities:

Please contact me during office hours to discuss academic accommodations that may be needed during the semester due to a documented disability. The Associate Dean of Students Office engages in an interactive process with each student and reviews requests for accommodations on an individualized, case-by-case basis. Depending on the nature and functional limitations of a student's documented disability, he/she may be eligible for academic accommodations. The Associate Dean of Students Office collaborates with students and their faculty to coordinate approved accommodations and services for qualified students with disabilities. If you have a documented disability for which you wish to request academic accommodations and have not contacted the Associate Dean of Students Office, please do so as soon as possible. The Associate Dean of Students Office is located in Weimer K. Hicks Student Center, upper level east, room 119, and could be reached at 269-337-7209 or at studev@kzoo.edu. Detailed information regarding the process to request accommodations is available at https://www.kzoo.edu/student-life/students-with-disabilities/.

Course Calendar (tentative):

(this schedule is subject to change, with prior notification of the Instructor)

WEEK	Topics
Week 1 March 27 – March 31	Probability Primer and Mathematical tools
Week 2 April 03 – April 07	The Simple Linear Regression Model
Week 3 April 10 – April 14	The Multiple Regression Model
Week 4 April 17 – April 21	Interval Estimation and Hypothesis Testing
Week 5 April 24 – April 28	Violation of Classical Assumptions (1)
Week 6 May 01 – May 05	Violation of Classical Assumptions (2)
Week 7 May 08 – May 12	Indicator Variables
Week 8 May 15 – May 19	Simultaneous Equations Models
Week 9 May 22 – May 26	Regression with Time-Series Data: Stationary Variable
Week 10 May 29 – June 02	Regression with Time-Series Data: Nonstationary Variable
Final Week June 04 - June 07	**Take-home exam**