



School	Business
Department	Economics, Business & Finance
Module title	Econometrics
Module Code	2104209
Credit hours:	3 Credit Hours
Module Leader	Huthaifa Alqaralleh (huthaifa89@mutah.edu.jo)

This course provides an understanding of the concept of econometrics and how to use statistical tools to understand empirical economic research and to plan and execute independent research projects. Among others, this course will cover statistical inference, Estimation and Forecasting using regression analysis, generalized least squares, instrumental variables, and simultaneous equations models. The course will empirically evaluate economic theories and models, and investigating their validity by confronting them with data, using statistical software such as Eviews, R, and Stata.

On completion of this module, students should:

- Estimate and test linear and log-linear models.
- Interpret the regression output of standard econometric software.
- Demonstrate awareness of econometric problems and methods.
- Handle a dataset to create and interpret a simple econometric model.

Module outline

- Week 1: Introduction; The Nature of Econometrics and Economic Data, Chapter 1
- Week 2: Review of statistical inference, Chapter 2
- Week 3: Regression; Simple and Multiple Dummy variables, Chapter 3
- Week 4: Regression; Dummy variables and interactions, Chapter 4
- Week 5: Regression; differences-in-differences, Chapter 5
- Week 6: Midterm Exam
- Week 7: Inference problems - heteroscedasticity and autocorrelation, Chapter 6
- Week 8: Inference problems - heteroscedasticity and autocorrelation, Chapter 7
- Week 9: Instrumental Variables, Simultaneous Equations Models, Measurement Error, Chapter 8
- Week 10: Simultaneous equations models I; The use of structural models, Chapter 9
- Week 11: Simultaneous equations models I; The identification problem, Chapter 9
- Week 12: Simultaneous equations models II; Two-stage least squares, Chapter 10

- Week 13: Simultaneous equations models II; Sampling variance of 2SLS estimates, Chapter 11
- Week 14: Selected topics, Online selected
- Week 15: Revision
- Week 16: Final Exam

Course Materials

- Lecture slides.
- Wooldridge, Jeffrey M. Introductory Econometrics: A Modern Approach.
- Goldberger, Arthur S. A Course in Econometrics. Cambridge, MA: Harvard University Press

Module Organization

- **Teaching:** 3-hour lectures per week
- **Student workload:** Approximately 6 hours of study per week
- **Feedbacks** will take the shape of one-to-one.

Assessment method:

- Mid Term Exam 30% (1 hour): week 7.
- Weekly exercises/assignments 20% (1 hour): week 11.
- Final Exam 50% (2 hours): week 16.

Course policies

To be explained to the students at the first meeting:

- ✓ **Class attendance:** Students are expected to attend all lectures of this course due to the nature of the course that adopts a cumulative learning process. A prior approval is required for class absence, except for emergencies.

*Students **absent** from class are responsible for obtaining notes of lectures and project assignments from fellow students and are responsible for turning such assignments when due. Absence is not an excuse for meeting an assignments due date.*

- ✓ **Tardy:** Arriving late are not expected in both on-campus and online lectures (if any), as it would affect the understanding of the student to the new topic, and therefore his performance in the daily exercise.
- ✓ **Class behavior:** A student is expected to pay full attention to the tutor, to respect his colleagues, and to keep the lectures and his table clean and tidy. Additionally, full attention shall be kept during the classes as the peer-to-peer learning is one of the major learning tools in the lecture.
- ✓ **Food and drinks:** Snacks and drinks with lids are allowed in the lectures.
- ✓ **Submissions and exams:** The weekly exercises are expected to be submitted on time. Late submissions are only accepted within a week of the original deadline and with 20% cut of the main grade. Failure to attend any exam or quiz will result to have a mark of zero.
- ✓ **Cheating:** Cheating in all its forms are not accepted and would result in an automatic zero for the submission/exam and would be reported to the dean to investigate the case and decide upon a suitable punishment according to the university regulations.