



## Econometrics I Course Descriptor

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Course Title	Econometrics I	Faculty	Economics
Course Code	NCHEC540	Course Leader	Dr Ravshonbek Otojanov
Credits Points	15	Teaching Period	Michaelmas
FHEQ Level	Level 5	Date approved	June 2020
Compulsory / Optional	Compulsory for Economics Major students, optional for PPE Economics Pathway students		
Pre-requisites	Statistics		
Co-requisites	None		

### COURSE SUMMARY

Econometrics is the application of statistical methods to economic data in order to give empirical content to economic relationships. This course introduces econometric methods and how they are applied to estimate and test the unknown parameters of economic relationships. The course mainly focuses on the classical linear regression model and also introduces econometric methods used in the analysis of time series and panel data models.

Students are exposed to the techniques by which economists and econometricians carry out empirical studies, and are exposed to the necessary element of uncertainty and randomness that needs to be acknowledged and quantified. Students are invited to consider and practise the major uses of econometrics: describing economic reality and testing hypotheses of economic theories. The course lays the foundations for further training in economics and econometrics.

### COURSE AIMS

The course aims to:

- Provide theoretical background for econometric methods used in empirical analyses.
- Foster the understanding of the application of econometric techniques on economic data for uncovering economic relationships and testing hypotheses implied by economic theories.

- Prepare students to read and critically evaluate empirical research in economics and econometrics.

### **LEARNING OUTCOMES**

On successful completion of the course, students should be able to:

#### **KNOWLEDGE AND UNDERSTANDING**

- K1b demonstrate a clear understanding of the mathematical and statistical background of applied economics
- K2b understand and express the underlying assumptions that justify the econometric techniques taught in the course
- K3b demonstrate knowledge and understand of the least squares estimator and evaluate the suitability of an econometric technique to a given dataset

#### **SUBJECT-SPECIFIC SKILLS**

- S1b use econometric models and methods to interpret and analyse real data in economics
- S2b draw balanced conclusions from econometrics analysis when given data and an empirical question
- S3b acquire an awareness of the role and contribution that elementary econometric methods make in the understanding of economic theories

#### **TRANSFERABLE SKILLS**

- T1b read and understand economic reports and journal articles that make use of the concepts and methods introduced in the course

### **TEACHING AND LEARNING**

Students will have the opportunity to engage with:

- 1 x virtual learning environment (VLE)
- 15 x large-group hours
- 10 x seminar hours
- 0.75 x tutorial hours (individual or group tutorial)
- Weekly office hours

Students are required to attend and participate in all timetabled sessions for this course and, with the ongoing support available, to manage their directed learning and independent study.

Total study hours for this course are: 150.

## EMPLOYABILITY SKILLS

- Students will develop skills necessary for analysing and communicating economic reports that make use of the concepts and methods introduced in the course.
- Students will be able to present data and reports of a high standard and learn to make data-driven decisions.
- Students develop skills necessary to deliver a small-scale empirical project, and the management of the project from initial conception to delivery.

## ASSESSMENT

### FORMATIVE

Students will be formatively assessed during the course by means of set assignments. These do not count towards the end of year results but will provide students with developmental feedback. For example, weekly problem sets are provided, and students present and discuss their answers in the tutorials.

### SUMMATIVE

Assessment will be in one form:

AE:	Assessment Activity	Weighting (%)	Online submission	Duration	Length
1	Examination	100%	No	2.5 Hours	N/A

The examination will consist of a number of questions, from which the student will have the choice of answering a specified number. The examination will be assessed in accordance with the assessment aims set out in the Programme Specification.

## FEEDBACK

Students will receive formal feedback in a variety of ways: written (including via email correspondence); oral (within one-to-one tutorials or on an ad hoc basis) and indirectly through discussion during seminars. Students will also attend the formal meeting, Collections, at the end of Michaelmas and Hilary in which they will receive constructive and developmental feedback on their term's performance.

Feedback is provided on written assignments (including essays, briefings and reports) and through generic internal examiners' reports, both of which are posted on the College's VLE.

## INDICATIVE READING

Note: Comprehensive and current reading lists for courses are produced annually in the Course Syllabus or other documentation provided to students; the indicative reading list provided below is used as part of the approval/modification process only.

### BOOKS

Dougherty, C. (2016), *Introduction to Econometrics*, Fifth Edition, Oxford: Oxford University Press.

**INDICATIVE TOPICS**

Students will study the following topics:

- Review of statistics
  - Simple linear regression model
  - Multiple regression model
  - Model specification
  - Variable specification
  - Measurement errors and IV models
  - Time series models
  - Limited dependent variable models
  - Panel models
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<b>Title: NCHEC540 Econometrics I Course Descriptor</b>					
<b>Approved by: Academic Board</b>					
Version number	Date approved	Date published	Owner	Location	Proposed next review date
2.0	June 2021	June 2021	Marianna Koli	1 Academic Handbook > Course Descriptors 2 VLE	April 2025
1.0	June 2020	June 2020	Marianna Koli	1 Academic Handbook > Course Descriptors 2 VLE	April 2025
<b>Modifications (As per AQF4)</b>					
Version number	Date approved	Date published	Modification (including category number)		
2.0	June 2021	June 2021	Category 2: Change to 'Teaching and Learning Strategy'		