



APPLIES TO ACADEMIC YEAR 2014/2015

GRA 6648 Research Methodology - Economics

Programme

Master of Science in Business (Economics)

Responsible for the course

Hilde C Bjørnland

Department

Department of Economics

Term

According to study plan

ECTS Credits

6

Language of instruction

English

Introduction

This course is a graduate level introduction to Econometrics.

Learning outcome

Econometrics uses statistical methods for estimating economic relationship, testing economic theories, and using estimated models to analyze the effect of policy intervention for the public and the private sector.

The goal of the course is to give students an intuitive yet formal understanding of the basic techniques used in applied econometrics, so that eventually they can master and produce sophisticated applied econometric analysis. The students will learn time series econometrics with applications in macroeconomics and international finance. They will master univariate and multivariate models of stationary and nonstationary time series, including structural VARs. The students will also learn about the main estimation methods, such as maximal likelihood and instrumental variables. In the end they should be able to design econometric projects.

Finally, the students will also learn advanced information search strategies. That is, acquaintance with advanced methods for information search, evaluation of sources, understand what a cited reference search is and know what a critical literature review is.

Prerequisites

Introductory Course in Econometrics and basic knowledge in the use of library sources and search techniques

Compulsory reading

Books:

Bjørnland, Hilde Christiane, Leif Anders Thorsrud. 2015. Applied time series for macroeconomics. 2nd ed. Gyldendal akademisk

Favero, Carlo A. 2001. Applied macroeconometrics. Oxford University Press. Chapter 1,2,3 and 6

Other:

Articles supplementing the books will be suggested. These can be downloaded from the Library

During the course there may be hand-outs and other material on additional topics relevant for the course and the examination.

Saunders, Mark, Philip Lewis and Adrian Thornhill. 2012. Research methods for business students. 6th ed. Essex : Pearson Education. Chapter 3: Critically reviewing the literature. Pp. 70-124. Will be available electronically

Recommended reading

Books:

Patterson, Kerry D. 2000. An introduction to applied econometrics : a time series approach. Macmillan. Kap 2, 3, 6, 7, 8, 14

Articles:

Christiano, L.J., M.Eichenbaum and C.L. Evans. 1999. Monetary policy shocks : what have we learned and to what end?. I: Taylor, John and Michael Woodford, eds, Handbook of macroeconomics, 1A. Elsevier. s. 65-148

Course outline

I. Introduction to advanced information search strategies (3 hours in the pc-lab)

- Acquaintance with advanced methods for information "harvesting", search technique, evaluation of sources
- Understand what a cited reference search is, know how to do it and be acquainted with how one can make use of it
- Know what a critical literature review is and how this type of articles may be searched for and used

II. Introduction to time series - Stationary univariate time series

- White noise, moving average, autoregression, ARMA models
- Forecasting
- Lagging and leading indicators of the business cycle, the role of financial variables

III. Non-stationary univariate time series

- Deterministic and stochastic trends, unit root tests, structural change
- Trend/cycle decompositions
- Analysis of business cycles

IV. Classical Multiple Linear Regression Model

- Least squares - specification, computation, diagnostic tests
- Hypothesis testing
- Spurious regression and economic relationships

V. Vector autoregression (VAR) methodology

- Granger causality, cointegration, economic examples (i.e. purchasing power parity)
- Structural VARs – estimation, identification, impulse responses
- Monetary policy in structural VAR systems

VI. Methods of Estimation

- Instrumental variables (IV) estimation
- Maximum likelihood estimation

VII. Setting up an econometric project

- Research ethics, data handling, specification, modeling, policy analysis

Literature: Most articles can be downloaded. The remaining articles will be copied into a compendium.

During the semester there will be thesis seminars to guide the students towards writing a thesis registration form. This is conducted outside the course.

Computer-based tools

It's Learning & online library resources : ISI web of science and Business Source Complete, and Google Scholar. The course uses modern statistical software such as EViews. Knowledge of EXCEL is required

Learning process and workload

A course of 6 ECTS credits corresponds to a workload of 160-180 hours.

Lectures and practical exercises that must be solved on the computer.

Please note that while attendance is not compulsory in all courses, it is the student's own responsibility to obtain any information provided in class that is not included on the course homepage/It's learning or text book.

Examination

A written Thesis registration form (pass/fail).

A group project/ presentation with max 3 students in each group (counts for 20 % of the grade).

A final 3 hour individual written exam (counts for 70 % of the grade).

A completed and approved work assignment given by the library (counts for 10 % of the final grade).

Specific information regarding student evaluation beyond the information given in the course description will be provided in class. This information may be relevant for requirements for term papers or other hand-ins, and/or where class participation can be one of several elements of the overall evaluation.

This is a course with continuous assessment (several exam elements) and one final exam code. Each exam element will be graded using points on a scale (e.g. 0-100). The elements will be weighted together according to the information in the course description in order to calculate the final letter grade for the course. You will find detailed information about the point system and the cut off points with reference to the letter grades on the course site in It's learning.

Examination code(s)

GRA 66484 for the thesis registration form)pass/fail)

GRA 66485 (continuous assessment) for the final grade in the course counting 100%

Examination support materials

A bilingual dictionary and BI-approved exam calculator. Examination support materials at written examinations are explained under examination information in the student portal @bi. Please note use of calculator and dictionary in the section on support materials.

Re-sit examination

It is only possible to retake an examination when the course is next taught.

The assessment in some courses is based on more than one exam code.

Where this is the case, you may retake only the assessed components of one of these exam codes.

Where this is not the case, all of the assessed components of the course must be retaken.

All retaken examinations will incur an additional fee.

Additional information**Honor Code**

Academic honesty and trust are important to all of us as individuals, and represent values that are encouraged and promoted by the honor code system. This is a most significant university tradition. Students are responsible for familiarizing themselves with the ideals of the honor code system, to which the faculty are also deeply committed.

Any violation of the honor code will be dealt with in accordance with BI's procedures for cheating. These issues are a serious matter to everyone associated with the programs at BI and are at the heart of the honor code and academic integrity. If you have any questions about your responsibilities under the honor code, please ask.