APPLIES TO ACADEMIC YEAR 2013/2014

MET 3590 Methods and Econometrics

Programme
Bachelor of Business Administration (2. year)

Responsible for the course
Genaro Sucarrat

Department
Department of Economics

Term
According to study plan

ECTS Credits
7,5

Language of instruction
Norwegian

Introduction

The course provides an introduction to the research methods of the social sciences and to econometrics. Research methods is important for the understanding of the strengths, limitations and possilities of applied research in general, and of econometric research in particular. Research methods also provides an insight into which approaches that are most appropriate for a certain research question. Regression analysis, a key component of econometrics, is a powerful and very flexible multivariate data analysis tool that can shed light on a very large number of economic issues.

Learning outcome

Acquired Knowledge
After the course, the students will have knowledge about:

- Important research methodological concepts
- The main principles of scientific thinking
- Knowledge of the main approaches (both qualitative and quantitative) to the collection, processing and analysis of data
- Basic econometrics
- Possibilities and limitations of econometric tools for business uses (research, quality control, forecasting, logistic analysis and control, etc.)
- Limitations in the case where statistical assumptions are violated
- The plurality of interpretation and uncertainty associated with econometric analysis

Skills objective
After the course the students will be able to:

- Understand and assess research based on scientific principles
- Evaluate which approaches that best suit the nature of a research question
- Collect, process and analyse data on the basis of scientific research methods
- Conduct econometric analysis by means of modern software
- Conduct and interpret the results of multiple econometric hypothesis testing, also in the cases where the classical assumptions are not fullfilled
- Undertake model selection

Attitude objective

The students should acquire a conscious and critical attitude towards data, towards econometric analysis, and towards the assessment and interpretation of results from applied research

Prerequisites
MET 2920 Statistics for economists or MET 3431 Statistics, or the equivalent.

Compulsory reading
Books:
Gujarati, Damodar. 2011. Econometrics by example : adapted for the course MET 3592 Økonometri at BI Norwegian Business School. Palgrave Macmillan
Johannessen, Asbjørn, Line Kristoffersen og Per Arne Tufte. 2011. Forskningsmetode for økonomisk-administrative fag. 3. utg. Abstrakt forlag

Recommended reading
Books:
Bårdsen, Gunnar og Ragnar Nymoen. 2011. Innføring i økonometri. Fagbokforlaget
Fugleberg, Ole og Ivar Kristianslund. 1995. Innføring i regresjonsanalyse og multivariate metoder. Bedriftsøkonomens forlag
Gripsrud, Geir, Ulf Henning Olsson og Ragnhild Silkoset. 2010. Metode og dataanalyse : beslutningsstøtte for bedrifter ved bruk av JMP. 2. utg. Høyskoleforlaget
Hellevik, Ottar. 2002. Forskningsmetode i sosiologi og statsvitenskap. 7. utg. Universitetsforlaget
Ringdal, Kristen. 2013. Enhet og mangfold : samfunnsvitenskapelig forskning og kvantitativ metode. 3. utg. Fagbokforlaget
Stock, James H., Mark W. Watson. 2012. Introduction to econometrics. 3rd ed. Pearson
Undheim, Johan Olav. 1996. Innføring i statistikk og metode for samfunnsvitenskapelige fag. 2. utg. Universitetsforlaget
Wooldridge, Jeffrey M. 2012. Introductory econometrics : a modern approach. 5th ed. Cengage Learning

Course outline
- Research methods and the philosophy of science
- Research questions, hypotheses and types of data
- Variation in research design, plurality of interpretation and the uncertainty of inference
- Simple and multiple regression
- Variation in functional form
- Regression with qualitative right-hand side variables
- Multicolinearity
- Heteroscedasticity
- Autocorrelation
- Specification error and model selection
- Dynamic models and forecasting
- Qualitative left-hand side variables

Computer-based tools
EViews, Stata, OxMetrics, Gretl or R

Learning process and workload

The course consists of 42 lecture hours, where the lectures may be combined with the solution of exercises and the use of software

Coursework requirements
As a means towards learning two obligatory exercises have to be solved and handed in during the semester. Both of these are obligatory and must be passed in order to be allowed to do the final exam. Each of the exercises consist of two parts, one case-based part that requires the use of software, and one part that is not case-based. The publication, solution and handing in of the exercises is

done via the current learning platform (It's Learning). Feedback is given either via It's Learning and/or lectures.

Recommended time used

Aktivitet	Hours
Lectures	36
Instruction on the use of econometric software	6
Solution of exercises	70
Self-study, preparation to lectures and group-studying	60
Obligatory exercises	15
Exam case and exam	13
Recommended time used in total	**200**

BI web studies
For the implementation at BI web studies the web-based learning platform It's Learning is used. There, the web lecturer publishes subject related material, exercises (including exercises in the folder as hand-in exercise with feedback), together with possible cases and digital learning material. The students are given the possibility to communicate with the web lecturer and fellow students. Meetings are held in the beginning of the semester and before the exam. The web students are also provided a study guide as a pedagogical guide to the syllabus.

Recommended time used

Aktivitet	Hours
Lectures	8
Instruction on the use of econometric software	34
Solution of exercises	70
Self-study, preparation to lectures and group-studying	60
Obligatory exercises	15
Exam case and exam	13
Recommended time used in total	**200**

Use of hours

Coursework requirements
In order to be allowed to enter for examiniation, two obligatory exercises have to be solved and handed in during the semester, see above under learning process and time-use

Examination
A three-hour individual multiple-choice exam concludes the course.
The questions on the exam will be partially based on a case that is handed out two weeks before the examination date. The results of the case study are not be submitted, but brought to the examination as a support material. In addition to questions from case the case study, the examination will include questions from the entire syllabus.

Examination code(s)
MET 35901 - Multiple choice exam, which counts for 100% of the grade in MET 3590 Methods and Econometrics, 7.5 credits.

Examination support materials
All support materials + exam Calculator TEXAS INSTRUMENTS BA II Plus ™ is allowed.
On the web.site @BI you will find more information about support materials at written examinations. Notice especially the rules regarding the use of calculators.

Re-sit examination
Re-sit examiniation is offered every term.

Additional information