APPLIES TO ACADEMIC YEAR 2016/2017

EXC 3506 Research Methods and Econometrics

Programme
Bachelor of Business Administration - BBA (2. year)

Responsible for the course
Svein Lund

Department
Department of Economics

Term
According to study plan

ECTS Credits
7,5

Language of instruction
English

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

Acquired Skills
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

Reflection
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
EXC 2904 Statistics or MET 2920 Statistics for economists or MET 3431 Statistics or the equivalent.

Compulsory reading
Books:
Gujarati, Damodar. 2015. Econometrics by example. 2nd ed. Palgrave Macmillan

Book extract:
Easterby-Smith, Mark, Richard Thorpe and Paul Jackson. 2015. Management and business research. 5th ed. Sage. ch. 2 ; The Philosophy of Management Research. Tidligere utgaver med titte Management research

Recommended reading

Books:
Stock, James H., Mark W. Watson. 2014. Introduction to econometrics. Updated 3rd ed., Global ed. Pearson
Wooldridge, Jeffrey M.. 2013. Introductory econometrics : a modern approach. 5th ed., international ed. South-Western, 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:

Actitivty	**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
Total recommended time used	**200**

Use of hours
36 hours - Lectures
6 hours - Instruction on the use of econometric software
3 hours - Coordination of the learning process on Itslearning
45 hours total

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
The course ends by means of a three hour individual multiple choice exam that counts 100% of the final grade. The exam questions are partly based on a case that is published two weeks before the exam. The results from the case do not have to be handed inn, but are brought along to the exam. In addition to the case results, the exam will also contain questions on the whole syllabus.

Examination code(s)
EXC 35061 - Multiple choice exam that counts 100% with the view of obtaining a pass grade in the course EXC 3506 Research Methods and Econometrics, 7.5 credits

Examination support materials
All support materials + 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 (https://at.bi.no/EN/Pages/Exa_Hjelpemidler-til-eksamen.aspx).

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

Additional information