UNIVERSITY OF GOTHENBURG

DEPARTMENT OF POLITICAL SCIENCE

SF2321 Applied Statistical Analysis, 15 credits

Tillämpad statistisk analys, 15 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Faculty of Social Sciences on 2009-06-25 and was last revised on 2017-12-13 by Department of Political Science to be valid from 2018-11-07, autumn semester of 2018.

Field of education: Social Sciences 100%
Department: Department of Political Science

Position in the educational system

The course Applied Statistical Analysis is given as either a free-standing course or as part of a Master Programme within the Faculty of Social Sciences. The course Applied Statistical Analysis is a method course in the second cycle.

Main field of studies	*Specialization*
European Studies	A1F, Second cycle, has second-cycle course/s as entry requirements
Political Science	A1F, Second cycle, has second-cycle course/s as entry requirements
Criminology	A1F, Second cycle, has second-cycle course/s as entry requirements
Media and Communication Studies	A1F, Second cycle, has second-cycle course/s as entry requirements
Sociology	A1F, Second cycle, has second-cycle course/s as entry requirements
International Administration and Global Governance	A1F, Second cycle, has second-cycle course/s as entry requirements

Entry requirements

To be eligible for the course the student should have obtained a pass grade for a first cycle social sciences research methods course (at least 15 credits) and have obtained 15 credits from a second cycle core course in the social sciences, or the equivalent. Applicants must prove their knowledge of English: English 6/English B from Swedish Upper Secondary School or the equivalent level of an internationally recognized test, for example TOEFL, IELTS.

Learning outcomes

A student who has passed the course will be able to:

Knowledge and understanding

- Display comprehensive knowledge and understanding about the usage of theory-based statistical analysis for the social sciences.
- Display comprehensive knowledge about the usage of different regression techniques such as linear regression, categorical regression, multi-level regression and times-series regression.
- Display in-depth knowledge and understanding of the application of different advanced regression techniques for various research problems in Social Science.

Competence and skills

- Be able to independently use methods of data management and to apply advanced regression on different data sources using a statistical computer package.
- Apply principles of statistical elaboration by being able to build and test theoretically deduced models.
- Demonstrate good ability to analyze, interpret and evaluate data and results obtained through different regression techniques.
- Independently plan, apply and analyze theory-based models using advanced regression techniques in a research paper.
- Independently produce text in accordance with good academic practice, including proper citation technique and use of references.
- Communicate clearly and proficiently in English both orally and in writing.

Judgement and approach

- Independently and critically assess and evaluate conclusions from social science research based on statistical analysis.
- Independently and critically assess and evaluate principles of operationalization, validity and reliability.

- Identify, evaluate and judge problems of research ethics in Social Sciences.

Course content

This course provides students with comprehensive understanding of the application of the most common regression techniques used in social science research and in public and commercial analyses and reports. The course consists of two major parts. In the first part, the teaching is arranged in workshops. Each workshop is concentrated around a regression technique and consists of lectures, teacher led computer labs sessions and one hand-in assignment. During these workshops, techniques such as linear regression, categorical regression, multi-level regression and time-series/panel regression are introduced. The second part of the course is focused on an independent research paper in which learned skills are put into practices and statistical methods are applied on a self-chosen research problem and data material.

Form of teaching

The course is taught through lectures, teacher-led computer tutorials and oral presentations at mandatory seminars.

Language of instruction: English

Assessment

The course is examined through written assignments, both in group and individually, and oral presentation at mandatory seminars. The first five assignments follow the workshop structure. The final assignment is an independent research paper with theoretical, methodological and empirical elements.

Completion of examined assignments are permitted. If the student does not submit the completion on time, the student will be failed on the assignment.

A student who is not able to attend a compulsory part of the course can do an alternative assignment. The assignment will be described in the course guide.

A student who has failed twice has the right to change examiner, unless weighty argument can be adduced. The application shall be sent to the Department.

In cases where a course has been discontinued or major changes have been made a student should be guaranteed at least three examination occasions (including the ordinary examination occasion) during a time of at least one year from the last time the course was given.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).
To be awarded Pass with Distinction (VG) for a full course, the final individual assignment must have been awarded Pass with Distinction (VG) and all of the other assigments must be awarded Pass (G). To be awarded Pass (G) for the full course all assigments must be awarded Pass (G).

Course evaluation

The student will be given the opportunity to do a course evaluation. The results of and possible changes to the course will be shared with students who participated in the evaluation and students who are starting the course.