Course content

Course content

The course introduces students to various statistical techniques widely used in the peace and conflict literature. The main focus is on:

* Ordinary Least Squares (OLS) regression;
* Count and limited dependent variable models;
* Different data structures and levels of measurement

The course is mandatory for the PECOS-students that follow the political science track and will provide them with tools to read and critically evaluate existing statistical research on peace and conflict topics, as well as conducting their own statistical studies.

Learning outcome

Learning outcome

**Knowledge**

Students will

* obtain a good grasp of various statistical concepts and measures;
* be well acquainted with different types of data structures and the differences between them, including cross-sectional data, time-series data, and panel data;
* be well acquainted with various criteria for "good" estimators;
* know the ordinary least squares estimator, and under which conditions it functions properly;
* know models appropriate for limited and count dependent variables, and have introductory knowledge of multilevel models;
* be well acquainted with various transformations of variables, such as logarithmic transformations, and understand what a variable's level of measurement is;
* learn how to interpret interaction terms and discuss interaction effects;
* obtain some standard types of robustness checks for statistical analysis;
* learn how to read and present statistical material visually in tables and figures.

**Skills**

Students will

* be able to critically read and evaluate existing statistical studies on peace and conflict topics;
* be able to handle data sets using R, including coding new variables and transforming existing variables in the data set;
* be able to apply the various statistical models mentioned above to data sets, and learn how to properly test hypotheses, interpret results, and draw careful conclusions;
* be able to replicate statistical studies in peace and conflict research, and to conduct independent statistical studies on peace and conflict topics.

**Competences**

Students will

* enhance their capabilities in carrying out thorough, independent and critical analysis of complex questions;
* enhance their capabilities in critically evaluating empirical research;
* enhance their understanding of various elements of the scientific process, including aspects of the relationship between theory and empirical evidence and between concepts and measures.

Admission

Students who are admitted to study programmes at UiO must each semester [register which courses and exams they wish to sign up for](http://www.uio.no/english/studies/registrations/course-registration/) in Studentweb.

Students enrolled in other Master's Degree Programmes can, on application, be admitted to the course if this is cleared by their own study programme.

If you are not already enrolled as a student at UiO, please see our information about [admission requirements and procedures](http://www.uio.no/english/studies/admission/).

**For incoming students**

All Master's courses in Political Science must be registered manually by the Department, they will not appear in Studentweb. Contact your international coordinator at UiO.

Prerequisites

Formal prerequisite knowledge

Basic concepts in descriptive statistics related to:

* measures of central tendency (e.g. mean and median),
* dispersion (e.g. standard deviation, range),
* and measures of association and correlation (e.g. percentage difference and Pearson's r correlation coefficient).

Furthermore, basic knowledge of inferential statistics and of OLS regression (bivariate and multivariate) is required.

Recommended previous knowledge

[PECOS4021 – Research Methods](https://www.uio.no/studier/emner/sv/statsvitenskap/PECOS4021/index.html)

Teaching

**Lectures and seminars**

The seminars are not compulsory, but we recommend you to follow them.

Examination

3-hour written examination and term paper.

The term paper must:

* be between 3500-5000 words.
* be an empirical analysis, either in the form of an original study or a replication study.
* meet the [formal requirements for submission of written assignments](http://www.sv.uio.no/english/studies/resources/submission-written-assignments/isv.html)

The written examination and the term paper each counts for approximately 50 percent of the final grade. You receive one overall grade. You must pass the term paper and the written examination in the same semester.

[Previous exams with grading guidelines](https://www.uio.no/studier/emner/sv/statsvitenskap/PECOS4022/Previous%20exams%20with%20guidelines)

Written examination

The written examination is conducted in the digital examination system Inspera. You will need to familiarize yourself with the digital examination arrangements in Inspera.

[Read more about written examinations using Inspera.](http://www.uio.no/english/studies/examinations/inspera/)

Submit assignments in Inspera

You submit your assignment in the digital examination system Inspera. [Read more about how to submit assignments in Inspera.](https://www.uio.no/english/studies/examinations/submissions/)

Use of sources and citation

You should familiarize yourself with the rules that apply to [the use of sources and citations](http://www.uio.no/english/studies/examinations/sources-citations/). If you violate the rules, you may be suspected of [cheating/attempted cheating](http://www.uio.no/english/studies/examinations/cheating/).

Examination support material

Students may use dictionaries at this exam. Dictionaries must be handed in before the examination. Please read [regulations for dictionaries permitted at the examination](http://www.uio.no/english/studies/examinations/support-materials/sv-dictionary.html).

Calculators are permitted. It is not allowed to add new functions/information/software to a calculator, and it is not allowed to use calculators for communication during the exam.

Language of examination

The examination text is given in English, and you submit your response in English.

Grading scale

Grades are awarded on a scale from A to F, where A is the best grade and F is a fail. Read more about [the grading system](http://www.uio.no/english/studies/examinations/grading-system/).

Explanations and appeals

* [Explanation of grades and appeals](http://www.uio.no/english/studies/examinations/explanation-appeal/)

[Ask for explanation of your grade in this course](https://nettskjema.no/a/137129)

Resit an examination

If you are sick or have another valid reason for not attending the regular exam, we offer a [postponed exam](http://www.uio.no/english/studies/examinations/illness-postponed/) later in the same semester.

See also our information about [resitting an exam](http://www.uio.no/english/studies/examinations/new-exam/).

Withdrawal from an examination

It is possible to take the exam up to 3 times. If you [withdraw from the exam](http://www.uio.no/english/studies/examinations/withdrawal/) after the deadline or during the exam, this will be counted as an examination attempt.

Special examination arrangements

Application form, deadline and requirements for [special examination arrangements](http://www.uio.no/english/studies/examinations/special-arrangements/).

Evaluation

The course is subject to continuous evaluation. At regular intervals we also ask students to participate in a more comprehensive evaluation.