

CEU Political Science Department
MA Program
2008/2009 Winter

Multivariate Statistics

Instructor: Tamas Rudas

Office hours: by appointment

Class meets: Tuesday 17:20 – 19:00 and Friday 9:00 – 10:40

The class is offered to students both in the 1-year and the 2-year MA programmes. Students in the 2-year programme attend the whole class, students in the 1-year programme may earn grades and credit by attending the first half and completing the midterm requirements. Students in the 2-year programme, not in possession of the prerequisites of the class are encouraged to attend introductory classes offered in the 1-year programme.

Course description:

The class will discuss multivariate statistical methods that are often applied in political science. These methods seek to understand the nature of the relationships between variables. We will start with a review of multivariate regression analysis and then discuss variants of it that are able to handle categorical responses. Then we shall discuss factor analysis and various methods for the analysis of categorical data. The exact coverage will depend, to a certain extent, on the background of students in the class.

Goals of the course:

To present multivariate statistical methods in an applied setting appropriate for political scientists. To encourage students to run their own analyses. To show the correct and flexible interpretation of the results.

Class format:

Students will be encouraged to run their own analyses (with SPSS or similar software) and after some theoretical introduction, the outputs will be discussed, emphasizing correct interpretation and possible variants of the analyses.

Prerequisites

Ability to run SPSS or similar statistical software, plus basic statistics knowledge

Learning goals and outcomes:

Ability to choose the appropriate statistical method for several research problems; to parameterize and run the relevant analyses; to critically interpret the results of the analyses.

Texts:

There is no textbook for this class. The following books may be used as background reference:

SPSS for Windows made simple / Paul R. Kinnear, Colin D. Gray

A crash course in **SPSS** for Windows / Rod Corston and Andrew Colman

Exploring social issues using **SPSS** for Windows / Joseph F. Healey, Earl R. Babbie, Fred Halley

Quantitative data analysis with **SPSS** for Windows : a guide for social scientists / Alan Bryman and Duncan Cramer

Topics to be covered (subject to change)

Week 1 Multivariate regression

Week 2 Logistic regression

Week 3 Factor analysis

Week 5 Categorical data analysis I

Week 6 Review and midterm test

Week 7 Categorical data analysis II

Week 8 Student presentations and discussion I

Week 9 Student presentations and discussion II

Week 10 Student presentations and discussion III

Week 11 Student presentations and discussion IV

Week 12 Review

Grading:

Midterm test (1 year and 2 year MA) and final research report (2 year MA) on a topic selected by the student, using multivariate statistical methods discussed in class.