

**Research Methods****2015/2016**

Code: 42277

ECTS Credits: 10

Degree	Type	Year	Semester
4313335 Political Science	OB	0	2

**Contact**

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**Use of languages**

Principal working language: english (eng)

**Teachers**

Margarita Leon

**Prerequisites**

The quantitative part of the course assumes no prior knowledge other than a minimal mathematical background. Students who have not taken any type of quantitative course since high school should read the following text before the course starts:

Bolker, E. D., & Mast, M. 2015. *Common Sense Mathematics*. Mathematical Association of America. Available at <http://www.cs.umb.edu/~eb/qrbok/qrbok.pdf>.

Those who want to gain some more statistical insight are also strongly encouraged to read:

Wheelan, C. 2013. *Naked Statistics: Stripping the Dread from the Data*. New York: WW Norton & Company.

**Objectives and Contextualisation**

The aim of this course is for the students to be familiar with and know how to apply a series of the main social science research techniques of collecting and analysing data. In order to meet these objectives we include both quantitative and qualitative techniques. We cannot cover all the research techniques of the social sciences, but centre on those that can be found in the main social science journals. We prioritize issues of practical training and interpretation over very mathematical questions.

The sessions on quantitative and qualitative research techniques will be taught in parallel over the 8 weeks of the course. The classes combine theoretical lectures with seminars and sessions of practicing different techniques. An important part of the course takes place outside of the classroom in order to consolidate the use of a selection of the research techniques.

**Skills**

- Apply the qualitative and quantitative techniques necessary for the systematic and rigorous analysis of specific aspects of politics today.
- Demonstration reading comprehension for specialist texts in English.
- Design a research project that satisfies the criteria of rigour and academic excellence.
- Design and write projects and technical and academic reports autonomously using the appropriate terminology, arguments and analytical tools in each case.

- Identify the main methodological difficulties that arise in political analysis and know how to deal with them using the existing tools.
- Manage a set of political science data and specific sources, such as statistics, surveys or other documents.
- Using the appropriate criteria make an individual evaluation of reports, documents and research carried out by third parties.

## Learning outcomes

1. Access data sources appropriate for the analysis of political science.
2. Demonstration reading comprehension for specialist texts in English.
3. Design and write projects and technical and academic reports autonomously using the appropriate terminology, arguments and analytical tools in each case.
4. Identify appropriate to answer a research question and analyze qualitative data using the main techniques of analysis and appropriate software coding qualitative techniques.
5. Identify the main advantages and difficulties with respect to the validity and reliability of the techniques selected.
6. Identify the most appropriate statistical method to respond to a research question with the data available and analyse quantitative data using the appropriate statistical software.
7. Make socio-political phenomena observable and/or quantifiable.
8. Process and prepare data collected for analysis using the corresponding software
9. Relate one of more quantitative and/or qualitative techniques to a research question and justify why this was the most appropriate selection.
10. Understand the current debates and challenges of the main quantitative and qualitative research techniques.
11. Understand the main qualitative and quantitative research techniques.
12. Using the appropriate criteria make an individual evaluation of reports, documents and research carried out by third parties

## Content

### QUALITATIVE METHODS

#### Introduction

#### **Session 1. Introduction to qualitative research techniques**

*What are the main characteristics of qualitative research? How to assess validity and reliability in qualitative research. What kind of research questions can we ask using qualitative research techniques? Which types of qualitative techniques can best be combined and how may they be triangulated?*

#### Data Collection

#### **Session 2, Fieldwork**

*How to enter and exit the field? How to use fieldwork in political science research? The ethics of qualitative research methods.*

#### **Session 3, Interviews**

*What are the characteristics and differences between structured, semi-structured and open-ended/narrative interviews? How may the researcher sample the interviewees in a qualitative research project?*

#### **Session 4 Group Interviews (focus groups) + Documentary research**

*Introduction to how to plan, conduct and analyse group interviews/focus groups, Documentary research and evaluating written sources.*

**Data analysis: Introduction to different methods of qualitative data-analysis**

**Sessions 5, 6, and 7, Analysis of Interviews: Introduction to CAQDAS and ATLAS.ti**

*Presentation of key features of grounded theory.*

**Sessions 8 and 9: Qualitative Comparative Analysis (QCA)**

**Session 10. Joint presentation and discussion of first hand experience in qualitative methodology**

**QUANTITATIVE METHODS**

All sessions take place in the computer lab and are structured into two parts. The first part is devoted to a lecture. The second is intended to provide practical experience with the related lecture topics, mainly through exercises with the statistical software Stata. A short introduction to Stata will be offered during at the end of the first semester within the Introduction to Research course.

**Session 1: Introduction**

*Data sources for quantitative analysis in the social sciences. Individual and aggregate data. Importing data to Stata. Exporting and presenting results. Replicability and research protocols.*

**Session 2: Descriptive statistics**

*Levels of measurement. Distributions. Central tendency and dispersion.*

**Session 3: Basic bivariate analysis**

*Cross-tabulations. Mean comparisons.*

**Session 4: Introduction to statistical inference.**

*Introduction to statistical inference. Confidence Intervals. Hypothesis testing.*

**Session 5: Bivariate hypothesis testing**

*Chi-square test. T-test. Oneway ANOVA*

**Session 6: Correlation and bivariate regression**

*Scatterplots. Correlation coefficient. The linear regression model.*

**Session 7: Linear regression (II).**

*Model fit. Inference for regression. Regression assumptions and diagnostics. Linearity and other functional forms. Heteroscedasticity.*

**Session 8: Introduction to multiple regression.**

*The logic of statistical control. The basics of multiple regression.*

**Session 9: Multiple regression (II)**

*Categorical independent variables.*

**Session 10: Multiple regression (III)**

*Specification. Basic model interpretation. Multicollinearity.*

**Session 11: Multiple regression (IV)**

*Interactions.*

## Session 12: Logistic regression

*Dummy dependent variables. The logistic regression model. Interpretation of coefficients and oddratios. Model fit and predictive efficacy.*

## Session 13: Logistic regression (II)

*Postestimation and predicted probabilities. Marginal effects.*

## Session 14: Regression model extensions

*Beyond dichotomous dependent variables. Ordinal and multinomial logit. Time series regression. Multilevel regression.*

## Sessions 15 and 16: Limits and alternatives to regression for causal inference

*Causality and limits of multiple regression. The experimental method. Quasi-experimental methods: Propensity score matching and difference-in-differences.*

## Methodology

The learning process will stem from a combination of theory (ordinary lectures) and practice. The students' participation is essential to achieve the desired goals.

Completing the assignments is necessary, and the professors will be open to the incorporation of your own research interests to the course, especially those related to your masters' theses.

## Activities

Title	Hours	ECTS	Learning outcomes
<b>Type: Directed</b>			
Collective tutoring/discussion of projects	5	0.2	5, 9, 11, 12
In-class practice	25	1	1, 6, 8, 11, 12
Lecture	30	1.2	5, 6, 10, 11
<b>Type: Supervised</b>			
Individual tutoring	10	0.4	3, 5, 6, 8, 9, 11
<b>Type: Autonomous</b>			
Qualitative data analysis	30	1.2	3
Qualitative data collection/generation	30	1.2	3, 8, 11
Quantitative data analysis	30	1.2	3, 5, 6, 8, 11
Readings	30	1.2	2, 5, 10, 11, 12
Writing essays/reports	30	1.2	2, 3, 5, 10, 11, 12

## Evaluation

The major part of the evaluation of this module is through continuous practice and feedback on the understanding and use of various research techniques. The evaluation consists of:

- Participation in class (it is obligatory to attend at least at 80% of the sessions in order pass this module)
- 6 exercises related to the different qualitative and quantitative research techniques.
- Exam related to the quantitative sessions

**The evaluation on qualitative techniques represents 40% of the final grade:** The students will hand in 3 exercises during the course:

- Exercise 1: Practice of interview and/or participant observation (50%)
- Exercise 2: Practice on the main Atlas.ti functions of support for analysis of qualitative interviews (30%)
- Practice of Qualitative Comparative Analysis (20%)

**The evaluation on quantitative techniques represents 60% of the final grade:** The students will submit 3 assignments during the course. They will also complete two exams. The grade will be based on:

- Midterm exam (25%)
- Final exam (35%)
- Three homework assignments (10%, 10%, and 20%). The assignments are conceived as partial submissions of a data analysis project related to the student's research interest

**IMPORTANT: In order to pass the course, it is required for students to obtain a grade of at least 5 over 10 in each of its two parts--qualitative and quantitative.**

## Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
Practice of interview and/or participant observation	20%	6	0.24	3, 4, 5, 9, 10, 11
Practice of Qualitative Comparative Analysis	8%	2	0.08	1, 2, 4, 8
Practice on the main Atlas.ti functions of support for analysis of qualitative interviews	12%	2	0.08	1, 2, 4, 8
Quantitative final exam	21%	5	0.2	2, 3, 5, 10, 11, 12
Quantitative home assignment 1	6%	3	0.12	1, 3, 6, 7, 8, 9, 11
Quantitative home assignment 2	6%	3	0.12	1, 3, 6, 7, 8, 9, 11
Quantitative home assignment 3	12%	6	0.24	1, 3, 6, 7, 8, 9, 11
Quantitative midterm exam	15%	3	0.12	2, 3, 5, 6, 9, 10, 11, 12

## Bibliography

### Qualitative

Della Porta, D. & M. Keating, M. 2008. *Approaches and Methodologies in the Social Sciences: A Pluralist Perspective*. Cambridge: Cambridge University Press.

Denzin, N. K., & Y. S. Lincoln (Eds.). 2012. *Strategies of Qualitative Inquiry*, 4<sup>th</sup> ed. Thousand Oaks, CA: Sage.

### **Quantitative**

Acock, A.C. 2014. *A Gentle Introduction to Stata*, 4<sup>th</sup> ed. College Station, TX: Stata Press.

Agresti, A. 2009. *Statistical Methods for the Social Sciences*, 4<sup>th</sup> ed. Pearson Prentice Hall.

Kellstedt, P. M. & G. D. Whitten. 2013. *The Fundamentals of Political Science Research*, 2<sup>nd</sup> ed. Cambridge: Cambridge University Press.

Lewis-Beck, M. (1980) *Applied regression: An introduction*. Thousand Oaks: Sage Publications.

Pollock, P. H. 2012. *The Essentials of Political Analysis*, 4<sup>th</sup> ed. Washington, DC: CQ Press.

Pollock, P. H. 2015. *A Stata Companion to Political Analysis*, 3<sup>rd</sup> ed. Washington, DC: CQ Press.