PO11Q-15 Introduction to Quantitative Political Analysis I

22/23

Department
 Politics & International Studies
Level
 Undergraduate Level 1
Module leader
 Florian Reiche
Credit value
 15
Module duration
 10 weeks
Assessment
 Multiple
Study location
 University of Warwick main campus, Coventry

Description

Introductory description

A vast amount of political research is quantitative, and even if you decide never to conduct quantitative analysis yourself, you will find an introductory level of knowledge in quantitative methods useful to critically engage with your discipline as a whole. Skills in data analysis are also crucial for finding employment in graduate level jobs; the Institute of Student Employers found in its 2018 report that "data analysis" is amongst the 5 most important skills employers wish graduate students to have. This module will deliver an introduction to quantitative political analysis. It is based on Reiche's typology of Quantitative Methods, and explores each of its tasks (conceptualisation and measurement, numerical data, data analysis and interpretation) at an introductory level. The module uses the software R.

Module aims

- To introduce students to the importance of quantitative methods in political analysis

- To introduce students to the typology of quantitative methods

- To deliver a basic introduction to each task of quantitative methods (conceptualisation and measurement, numerical data, analysis, and interpretation) through substantive politics

examples

- To provide an introduction to "data analysis" skills for employability

- To introduce students to the software R

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

1. Introduction to Quantitative Methods in Political Analysis

I. CONCEPTUALISATION AND MEASUREMENT

1. Conceptualisation and Measurement

2. Conceptualisation and Measurement in the Real World

II. NUMERICAL DATA

1. Exploration of Single Variables

2. Levels of Measurement and Distributions

3. (Reading Week)

4. Sampling Methods

III. DATA ANALYSIS AND INTERPRETATION

1. Sampling Distributions and z-Scores

2. Confidence Intervals and the t-Distribution

3. Sample Size and Statistical Inference

Learning outcomes

By the end of the module, students should be able to:

- Apply the tasks of Quantitative Methods to substantive politics research problems
- Understand the basic principles of conceptualisation and measurement in political science
- Analyse core descriptive statistics, by hand and through the software R
- Understand the basic principles of sampling
- Understand the principles of statistical inference

Indicative reading list

- Acock, Alan C. 2014. A Gentle Introduction to Stata, Fourth Edition, Stata Press

- Agresti, A. and B. Finlay. 2008. Statistical Methods for the Social Sciences, 4th ed. Upper

Saddle River, NJ: Prentice Hall.

- Bryman, A. 2008. Social Research Methods, 4th ed., Oxford: Oxford University Press

- Coolidge, Frederick L. 2012. Statistics: A Gentle Introduction. Sage

- Diamond, Ian and Jefferies, Julie. 2000. Beginning Statistics: An Introduction for Social Scientists. Sage

- Frankfort-Nachmias, Chava. 2008. Research methods in the social sciences, 7th edition, New York: Worth Publishers.

- Gill, Jeff. 2006. Essential Mathematics for Political and Social Research, Cambridge: Cambridge University Press.

- Hamilton, Lawrence. 2008. Statistics with Stata - International Edition. Stata Press

- Lomax, Richard G. and Debbie L. Hahs-Vaughn. 2012. An Introduction to Statistical Concepts, 3rd edition. Routledge

- Reiche, Florian (forthcoming) Introduction to Quantitative Methods in the Social Sciences. Oxford: Oxford University Press

Research element

Mini Research Project during seminars

International

Data from around the world is used.

Subject specific skills

- Quantitative Research Design
- Basic proficiency in a statistical programme
- Process of Conceptualisation and Measurement and its relevance in political science research
- Calculation of descriptive statistics

Transferable skills

- Written communication skills
- Oral communication skills
- Problem-solving skills
- Skills in the use of information technology
- Skills of interpretation and the critical analysis of primary and secondary sources
- The ability to digest, retain and apply complex information and ideas
- Ability to conduct research and reference your work appropriately
- Time management skills and the ability to meet deadlines

- The ability to reflect critically on the extent and limitations of how and what you have learned, discovered and understood

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Study

Study time

Type	Required
Lectures	9 sessions of 1 hour (6%)
Seminars	9 sessions of 2 hours (12%)
Private study	123 hours (82%)
Total	150 hours

Private study description

Guided reading through reading list, completion of research project and homework in preparation of seminars.

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Students can register for this module without taking any assessment.

Assessment group D

	Weighting	Study time
Conceptualisation and Measurement	25%	

The report will ask students to critically reflect on the two tasks of conceptualisation and measurement for a political science concept; a list of concepts will be provided.

	Weighting	Study time
Online Examination	75%	
Multiple-Choice Exam		

- Online examination: No Answerbook required

Assessment group R

	Weighting	Study time
Online Examination - Resit	100%	

If a student fails the module overall, the resit will be conducted in the form of a 100% written exam in September.

- Online examination: No Answerbook required
- Students may use a calculator

Feedback on assessment

Detailed and regular feedback will be provided throughout the module. \r\n\r\nFORMATIVE\r\nVerbal feedback on lab and workshop work will be provided at relevant points in the lectures and workshops throughout all sessions. This will be provided by module teachers at each session. In addition, student participation will be strongly encouraged and this will include students giving each other peer feedback during classes on their own work as well. Students also have the opportunity to test their knowledge on a formative weekly quiz on Moodle with instant feedback. \r\n\r\nSUMMATIVE\r\nDetailed written feedback will be provided on the written report. A solutions key to the exam will be uploaded after the exam has taken place.

[Past exam papers for PO11Q](#)

Availability

Courses

This module is Core for:

- Year 1 of UPOA-M162 Undergraduate Politics, International Studies and Quantitative Methods

This module is Optional for:

- Year 2 of UPOA-M100 Undergraduate Politics
- UPOA-M16A Undergraduate Politics and International Studies
    - Year 2 of M16A Politics and International Studies
    - Year 2 of M16A Politics and International Studies
    - Year 2 of M16A Politics and International Studies

This module is Option list A for:

- Year 1 of UPOA-M100 Undergraduate Politics

- UPOA-M16A Undergraduate Politics and International Studies
  - Year 1 of M16A Politics and International Studies
  - Year 1 of M16A Politics and International Studies
  - Year 1 of M16A Politics and International Studies
- Year 2 of UPOA-ML13 Undergraduate Politics and Sociology
- Year 2 of UPOA-M163 Undergraduate Politics, International Studies and French