Syllabus[1]

Contact Information

Instructor	Teaching Assistant
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Course website:	
https://chadefa1.github.io/	

Please note that your first point of contact is your teaching assistant.

Description

This module explores a variety of both qualitative and quantitative social science research to develop the skills for explaining causal mechanism in political phenomena. Especially, the class focuses on the logic of scientific inference, research design and measurement. This module also explores the uses and abuses of statistical reasoning in social and political studies. Students learn the basic rules of data analysis and the logic of statistical inference. The class covers various topics such as survey methodology, content analysis, (quasi) experiments, and policy analysis by doing such work themselves. On successful completion of this module students should be able to:

- Critically analyse existing political science and social science research on the basis of the research methods employed.

- Specify appropriate research questions in political science and construct effective research design strategies to answer these questions.

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[1]Please note that the syllabus is indicative of the material covered by the course and is subject to change

- Analyse quantitative data to uncover relationships between theoretically relevant variables.

- Effectively use statistical methods to conduct political science research.

- Effectively employ **R**, a statistical software package, to conduct political science research.

Lectures

We will have two lectures per week.

- Monday 9:00–9:50

- Wednesday 14:00–14:50

Both will take place on *Collaborate Ultra* and can be accessed either via Blackboard, or directly using the following link:

`https://eu.bbcollab.com/guest/b64b7164d2084373a25eb4bc7fc6d743`

Typically, one of the lectures will be about research methods in general, while the other will focus on statistical methods. The lectures will add to the readings for each week by providing examples, highlighting the main points, explaining difficult concepts and methods and providing extra material which is not covered in the textbooks or additional readings.

Tutorial Sessions

Participation in tutorial sessions is mandatory. It will be very difficult to do well on homework assignments, papers or the final exam if you do not attend tutorials regularly. Tutorials provide a forum for going over homework, similar problem sets, and topics covered in the lecture. The tutorials will also introduce the statistical software necessary to complete the assignments. Please note that it is necessary to be well prepared during tutorials (reading assigned materials, attending lectures, doing homework). The tutor will not repeat what is in the book or what was covered in the lecture. We assume that you have done that. The only way to learn methods and statistics well is by practising, so make sure to prepare your homework exercises well.

We will have weekly tutorial sessions from week 2 on. You will be assigned to a tutorial group automatically. Once you are assigned, you can only attend that group's meetings, unless you receive permission from the tutor to switch groups (either permanently or for a single session).

Online resources

I will provide module announcements via Blackboard.[2] All homework, paper assignments, lectures notes will be made available on my website at https://chadefa1.github.io/ there.

Books

We will use the following text books in the module:

- Janet Buttolph Johnson, Henry T Reynolds, and Jason D Mycoff. *Political science research methods, 9th edition.* CQ Press, 2019.

- Learning Statistics with R (LSR). *Learning Statistics with R.* 2015. Freely available at: `https://learningstatisticswithr.com/lsr-0.6.pdf`

- (**Optional**) R.S. Witte and J.S. Witte. *Statistics.* Wiley, 11 edition, 2013.

I am conscious of the cost of purchasing textbooks. Therefore, feel free to buy older versions of these textbooks. The only drawback is that the page numbers listed below may need to be adjusted to reflect the relevant edition.

Software

We will use the statistical software package **R** in this module. It is free and is one of the most powerful and commonly used statistical softwares in the world. I recommend that you install both R and a development environment called Rstudio. The steps will be covered in class and in the tutorial.

- Obtain **R** from: `https://cran.r-project.org/`

- Obtain RStudio from: `https://rstudio.com/products/rstudio/download/` (choose the free version)

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[2]If you are registered for this module in My TCD, you should also be automatically added to the Blackboard environment. Please make sure this is indeed the case.

Grading

The final grade consists of the following parts:

- 60% of the mark is based on an end-of-term exam, which covers both research methods and statistics. The exam will consist of short descriptions of relevant concepts, short essay questions and the interpretation of a statistical model.

- 1 paper counting 16% towards your overall mark. In this paper, you will set up a (small) research project (based on secondary data) and execute it (including a limited statistical analysis). This work will be done in groups submitting joint papers. We will assign you to a random partner for this project. Further information on the paper assignment will be made available via Blackboard. The deadline for submitting the paper on Turnitin is on Friday of the last week of term at 5:00 PM. Only one of the co-authors should submit the paper, but be sure to indicate the other co-authors on the title page.

- Assignments are worth 24% of your overall mark. In total, students will complete 4 of these exercises (each worth 6%). These homework exercises must be submitted via Turnitin by Friday 5:00pm of the week in which they are due (as indicated in the outline below). Assignments will be made available ahead of time on Blackboard.

Note that 5 points per day will be taken off your mark on assignments submitted late without a valid excuse (capped at 30 points).

Plagiarism

Unless explicitly stated otherwise, all coursework is individual and should be original (you should not re-use parts of a paper you wrote for another module, for example). You need to reference any literature you use in the correct manner. This is true for use of quotations as well as summarizing someone else's ideas in your own words. Useful information regarding essay writing may be found in the political science undergraduate student handbook, as well as http://www.plagiarism.org.When in doubt, consult with the lecturer before you hand in an assignment. Plagiarism is regarded as a major offence that will have serious implications.

Paper Submission

All coursework must be submitted via Turnitin (via Blackboard).

All coursework deadlines are strictly adhered to. Extensions on deadlines will only be granted in exceptional circumstances; relevant documentation (for example a medical certificate, or a letter/e-mail from your college tutor explaining the circumstances) should be provided when an extension is requested. All late work, unless excused beforehand, will have 5 marks deducted for each day beyond the deadline, as stated in the political science undergraduate student handbook. The weekly homework exercises must be submitted through turnitin on the Monday evening (11:59pm) preceding the tutorial session. This applies regardless of the tutorial you are assigned to. Attendance records are based on: 1) your presence at tutorial and 2) proof that the homework was attempted by the deadline. Please make sure that your answers are typed into a Word document and that you have made a good faith attempt at the analyses. Screenshots of the R output is not sufficient—you will need to interpret the results and procedures.

Module Outline

Schedule Details

Week 1

Lecture 1 (Research Design): Introduction and overview

Required readings: Johnson ch. 1

Lecture 2 (Statistics): Statistical enquiry

Required readings: LSR ch.1
Recommended readings: Witte ch. 1

Tutorial: None

Week 2

Lecture 1 (Research Design): The empirical approach to political science

Required Readings: Johnson ch. 2

Lecture 2 (Statistics): The R software: a brief introduction

Required Readings: LSR ch. 3, 4

Tutorial: The R software

Week 3

Lecture 1 (Research Design): Beginning the research process

Required Readings: Johnson ch. 3

Lecture 2 (Statistics): The R software: a brief introduction (II)

Required Readings: LSR ch. 3, 4

Tutorial: The R software

Week 4

Lecture 1 (Research Design): The building blocks of research

Readings: Johnson, ch. 4

Lecture 2 (Statistics): Describing a sample

Required Readings: LSR ch. 6
Recommended readings: Witte ch. 2

Tutorial: The R software

Assignment due: Assignment 1

Week 5

Lecture 1 (Research Design): Causation (I)

Readings: Johnson ch. 6

Lecture 2 (Statistics): Summarizing data

Readings: Required Readings: LSR ch. 5.
Recommended readings: Witte ch. 3, 4; Johnson ch. 11

Tutorial: Describing a sample

Week 6

Lecture 1 (Research Design): Causation (II)

Readings: Johnson ch. 9, 10

Lecture 2 (Statistics): Distributions

Required Readings: Johnson ch. 12.1. LSR ch. 9
Recommended readings: Witte ch. 5

Tutorial: Summarizing data

Assignment due: Assignment 2

Week 7: Reading week

Week 8

Lecture 1 (Statistics): From sample to population

Required readings: LSR ch. 10
Recommended readings: Witte ch. 8, 9; Johnson ch. 5

Lecture 2 (Statistics): Comparing samples (I): Hypothesis testing

Required readings: LSR ch. 11
Recommended readings: Witte ch. 10, 11; Johnson ch. 12.2, 12.3

Tutorial: Distributions

Week 9

Lecture 1 (Statistics): Comparing samples (II): t-tests

Required readings: LSR ch. 11, 13
Recommended readings: Witte ch. 13–15; Johnson ch. 12.4–12.6

Lecture 2 (Statistics): Tests for qualitative and ranked data

Required readings: LSR, ch. 13
Recommended readings: Witte ch. 19, 20; Johnson ch. 13 (until 'analysis of variance')

Tutorial: Samples and Populations

Assignment due: Assignment 3

Week 10

Lecture 1 (Statistics): Analysing relationships: Correlation

Required readings: LSR ch. 5.7
Recommended readings: Witte ch. 6, 21

Lecture 1 (Statistics): ANOVA

Required readings: LSR ch. 14
Recommended readings: Witte ch. 16

Tutorial: Hypothesis testing

Week 11

Lecture 1 (Research Design): The research report

Readings: Johnson, ch. 15

Lecture 2 (Statistics): Simulation

Readings: LSR ch. 8

Tutorial: Qualitative and ranked tests

Assignment due: Assignment 4

Week 12

Lecture 1: Review

Readings: None

Lecture 2: Q&A

Tutorial: Q&A

Week 13

Assignment due: Final Paper