

# Research Design

Master in Social Sciences  
Carlos III - Juan March Institute

Spring Term - 2022

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Class Hours: Tuesday, 10.00am-1.00pm

Location: Room 18.1.A04

Office Hours: Friday, 9.30-11.30 (18.2.C.07)

## Course Description:

This course is an introduction to the fundamentals of research design in social sciences. Its purpose is to provide students with a global and comprehensive view of the research process, to train them with the elemental skills of applied research to pursue rigorous, independent work, and to become them more sophisticated consumers of empirical research. The course will cover a range of topics, starting from the formulation of research topics and research questions, the development of theoretical arguments and testable hypotheses, the study of causality, an overview of basic qualitative and quantitative data analysis techniques plus other issues related with research design such as measurement, descriptive and statistical inference, mediation analysis or how to write a good research paper.

## Course Organization:

The course will be organized in 10 sessions, from February 21 to May 16. Each session will consist of two parts. First, the professor will deliver a lecture on the topic. Lectures will be backed with PDF presentations that will be available in Aula Global. The second part of the session will follow different dynamics: some weeks we will carry out practical activities in class to strengthen theoretical concepts, and in other sessions the students will present and discuss a research article. The professor will announce the instructions for each week in class.

## Textbooks and Readings:

Most of the material for lectures and required readings are form the following textbooks:

- Bueno De Mesquita, E., & Fowler, A. (2021). *Thinking clearly with data: A guide to quantitative reasoning and analysis*. Princeton University Press.
- Kellstedt, P. M., & Whitten, G. D. (2018). *The fundamentals of political science research*. Cambridge University Press.
- Powner, L. C. (2014). *Empirical research and writing: A political science student's practical guide*. CQ Press.
- Toshkov, D. (2016). *Research design in political science*. Macmillan Education, Palgrave.

## Course Requirements and Grading:

Attendance to lectures is mandatory. Required readings have to be done before the corresponding lecture. Recommended readings are voluntary. Students will be evaluated through class participation, presentation and discussion of research articles in class, and a final research paper that will be submitted at the end of the course. Each task will have the following weight for the final grade of the course:

- 60% research paper
- 15% presentation of a research article
- 15% discussion of a research article
- 10% attendance and participation

## Rules:

For the good development of the course, the following rules should be observed: The student must be quiet in the class except for questions and participation in the discussions. Use of cell phones is strictly forbidden. Laptops may be used, but only for taking notes.

## **Outline:**

### **1. Introduction to Research Design**

In this session the professor will explain the structure, organization and assessment of the course. We will also talk about the scientific logic of social science research, and why thinking about designs is very important for applied research.

### **2. Research Topics and Research Question**

From research topics to research questions. What is and what is not a good research question? Types of research questions. Where do research questions come from? Brainstorming Research Question.

*Required readings:* Powner (2014): Chapter 1 (pp. 1-19); Toshkov (2016): Chapter 2 (pp. 23-55).

### **3. The Art of Theory Building**

What is a theory? Where do theories come from? Developing explanatory theory. Formal theory in social science. From questions to theory to hypothesis. Causal mechanism and scope conditions. What makes a good theory?

*Required readings:* Powner (2014): Chapter 2 (pp. 21-48); Kellstedt & Whitten (2009): Chapter 2 (pp. 22-42)

*Recommended reading:* Toshkov (2016): Chapter 3 (pp. 56-82).

### **4. Causality and Experimental Designs in the Study of Social Sciences**

Causation: What is it and what is it good for? Causal claims as a thinking skill. The fundamental problem of causal inference. Potential outcomes and counterfactuals. Experimental studies. Natural experiments.

*Required readings:* Bueno de Mesquita & Fowler (2021): Chapter (pp. 37-50); Kellstedt & Whitten (2009): Chapter 3 (pp. 45-65)

*Recommended reading:* Toshkov (2016): Chapter 6 (pp. 145-164).

### **5. First Round of Student's Research Project Presentations**

In this session students will present the first steps of their research papers. At this point three parts of the project should be developed: a clear and well-motivated research question, the basis of the theoretical argument and a set of testable hypotheses.

## **6. Quantitative Designs**

Similarities and differences in quantitative and qualitative methods. The logic of Large-N research. Key elements in a Large-N design. Common designs for causal inference. Identification strategies in observational studies. Estimating causal effects.

*Required readings:* Toshkov (2016): Chapter 8 (pp. 201-208, 227-254)

*Recommended reading:* Powner (2014): Chapters 7 and 8

## **7. Qualitative Designs, Case Study and Mixed Designs**

Small-N comparative research. Necessary and sufficient conditions. Uses of single-case designs. Mixed and nested designs: a pragmatic approach to social science research.

*Required readings:* Toshkov (2016): Chapter 9 (pp. 258-284) and Chapter 10 (pp. 285-306). (pp.286-306)

*Recommended reading:* Toshkov (2016): Chapter 11 (pp. 310-325)

## **8. Second Round of Student's Research Project Presentations**

In this session student will present the research strategy of their projects.

## **9. Practicalities I: Literature Review, Concepts, Operationalization and Measurement**

How to think, find, organize and write the literature review in social science research. Conceptualization. Operationalization Why measurement matters. Problems in measuring concepts.

*Required readings:* Powner (2014): Chapter 3 (pp. 55-80); Toshkov (2014): Chapter 4 (pp. 83-105); Kellstedt & Witthen (200): Chapter 5 (pp. 86-102)

## **10. Practicalities II: Assessing Mechanisms and Communicating Research**

Causal mediation analysis. Intermediate outcomes. Styles of academic writing. Structuring research reports.

*Required readings:* Bueno de Mesquita & Fowler (2021): Chapter 16: (pp. 290-300); Toshkov (2016): Chapter 12 (pp. 328-334)

*Recommended reading:* McCloskey (2000). *Economical writing*, Waveland Press Inc.