## **Research Design**

Carlos III-Juan March Institute / Dep. of Social Science

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Instructor: Rickard Sandell

Email: fsandell@clio.uc3m.es Office: 18.2.D.04 (Office hours by appointment).

**Course Description:** This course introduces applied research designs for social-science problems. The course let students have a hands-on research experience, drawing on theoretical and methodological skills acquired in past courses.

The course emphasizes analytics and theorizing. The secret to good research is the capacity to; 1) identify social-science research problems, 2) find data describing these problems, 3) theorize and explain why observations are structured in a certain way, and finally 4) develop strategies to answer the resulting theoretical question empirically.

When testing theories, we are concerned with alternative/competing theories to the proposed research problem, and the advantages and disadvantages of the different research designs of the research problem.

The overall aim is to develop students research skills and prepare them to conduct research independently. Throughout the course students will develop several research design proposals. In these exercises, students will identify concrete research problems, identify data to describe the problem, theorize the problem, and develop explanations based on the theory and available observations. This work implies corroborating, in a tentative way, the proposed explanation and lay out a methodological design which test it. Throughout, students must present their work to the rest of the class. In relation to these presentations peers are required full participation. Their task is to constructively criticize and help in overcoming obstacles in the research process.

Three types of exercise are planned. First, the student group will attend to a series of theory puzzles. Secondly, students will develop a training exercise over the course of three weeks in which problem identification, observations, theorizing and explanation, and research strategy are developed and discussed. Finally, the students should prepare a research design paper.

**Course Requirements: Research design paper (60%):** The core requirement is writing a research design paper. This paper should contain two parts.

*Setting the stage:* Here the student identifies and motivate the research topic. For example, the problem could be a gap in the existing literature; that scholars predict empirical patterns that don't fit observations; there are contradictive predictions about a phenomenon etc. In this part the student should (1) identify the empirical pattern puzzle, and (2), consider existing literature on the problem, and demonstrate that the empirical

puzzle is unresolved. (A first draft of this part should be presented in the first half of the course.)

*Argument and Empirical Strategy:* In the second part students should draft a theoretical answer to the puzzle and present an empirical strategy to test theory. Be specific. Present hypotheses and empirical statements coherent with the theory. Describe relevant data and how to secure it. Identify the dependent variable. Operationalize the explanatory variable(s). Consider alternative explanations, and how to control them. Highlight strength and weaknesses of the empirical strategy.

The paper is a research proposal. Hence, the students don't have to assemble the data and conduct the research. However, the proposal has to be realistic and executable in the real-world. It is a good idea to treat the proposal as a first step towards a master thesis proposal. A short presentation of the proposal is due in the last session of the course. A final paper (containing the revised versions of the first and second part) is due on the date for the exam.

**Class Participation (40%):** Classes will be conducted in a seminar-style. Students are expected to complete required readings and be prepared to talk about them in class. Students are also requested to participate actively in the discussion following fellow student's presentations.