Research Methods
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The primary focus in this course will be on developing an understanding of how theoretical hypotheses are empirically tested, that is, on the application of the so-called hypothetico-deductive method.

Part I: Theory-testing research (16 hours)

Organization and management sciences progress through the development and testing of theoretical propositions. The purpose of the hypothesis-testing module is to acquaint the students with the methodological issues associated with theory-testing research. The module comprises five sessions, all of which include both theoretical discussion as well as examination of applications and relevant empirical research:

1. What is the role of theory in management studies? How do I make a theoretical contribution?
2. Reasoning in management studies and the hypothetico-deductive method
3. Operationalizing theories: measurement reliability and validity
4. Testing theories I: Theory elaboration using case study
5. Testing theories II: Statistical hypothesis testing and interpretation of statistical evidence

Part II: Experimental design (16 hours)

Hypothesis testing through causal inference is the purpose of experimental methods in behavioral sciences. Experimental investigation is one of the dominant paradigms of empirical inquiry in many fields of management studies. The emphasis of this part of the course will be on the application of experiments in basic fields of human investigation (mostly cognitive and social psychology) that will be relevant for a PhD student in any area of management. We will investigate a series of experimental research papers and will try to understand the relevance and implementation of experiments with respect to specific research questions. The module comprises five sessions, which include a discussion of theoretical issues and an examination of applications relevant to the topics, which are:

1. Use of experiments in theory-testing research: key assumptions, experimental units, measured and manipulated variables, main effects and interactions, extraneous factors
2. Types of experimental design: within- and between subject designs, before- and after measures, validity and parsimony
3. Developing manipulations and manipulation checks
4. Advanced experimental designs: multiple-session experiments, complex manipulations and interactions, manipulation in social interaction etc.
5. Recent developments: Experiments using response latency measures

As prerequisites for both parts I and II, we would expect you to have good basic knowledge of the following topics: estimation (least squares and maximum likelihood; efficiency, bias and consistency of estimates), hypothesis testing ($H_0$ vs. $H_1$), p-value, type I and II errors, statistical power. If you need to brush up on these topics, there is a high-quality online statistics textbook available for free at: http://www.statsoft.com/textbook/stathome.html.

You will be evaluated on the basis of class participation and a short term paper for each of the two parts of the course.