

Statistical consulting

Course Objectives

The overall objectives of the statistical consulting course are:

- to provide doctoral students with practical consulting and communication skills, such as how to present results verbally and in a written report, and
- how to work cooperatively with other researchers and/or practitioners

Course Description

The course allows students to apply commonly encountered statistical methods in the consulting environment. Written and oral communication skills are emphasized (in order to both understand the clients' needs and present the results) and ethical aspects of consulting are introduced. The course provides students with an opportunity to gain practical experience in consulting through various projects with clients.

The course immerses students in real world consulting, exposing them to all aspects of statistical data analysis including understanding the applied context and its goals, data collection, data modeling, and presentation of the results. Through a consulting program inside and outside the University, students work with researchers and practitioners from a multitude of disciplines providing recommendations for statistical methodologies appropriate for their problems. Projects are also examined through the lens of ethics underlying data collection, model assumptions, analysis, reproducibility, and reporting of results.

Tentative course topics:

a) About consulting classes dedicated to the following topics

- Communication
- Asking Questions
- Managing a Session
- Dealing with Difficult Clients
- Research ethics
- Legal aspects, privacy and confidentiality
- Consulting from Start to Finish

b) Practical sessions of consulting

Students, teachers, researchers and professionals from inside and outside the University are assigned a team of 'student consultants', who hold an intake meeting with the client and find out the details of their project and consulting request. Then, the consulting team presents the project to the class and the class discusses the problem and comes up with suggestions. The consulting team then reports the suggestions back to the client.

c) Case studies

In addition, throughout the semester there will be 3-4 case studies and data analysis assignments using data from previous consulting projects and published papers.