DEPARTMENT OF
GEOGRAPHY AND PLANNING

SURP819: Quantitative Methods

Queen's UNIVERSITY

Format	The course will incorporate theoretical and applied approaches to learning about quantitative research methods and statistics. The theoretical component will focus on basic statistical concepts. The applied component will introduce students to SPSS statistical analysis software through computer-based labs.
Class Assessment	Participation 20% Online Quizzes 30% Final Report 50%

COURSE OVERVIEW

This course introduces students to basic statistical techniques that can be applied to planning, policy analysis, needs assessment, and program evaluation, and provide the skills and knowledge for evidence-based planning practice. The aim of the course is to equip students with the theoretical foundation and analytical skills to understand and use statistics in practice. Students will have an opportunity to use data to explore, analyze, and present results on a planning issue of interest to them, developing hands-on experience with statistical software in the process.

LEARNING OUTCOMES

On successful completion of the course students will be able to:

- Explain quantitative research methods and basic statistical concepts.
- Apply these statistical concepts to analyses of planning-related questions and topics.
- Present findings from statistical analyses of quantitative data in a compelling report.
- Explain the value of quantitative research to planning practice.

COURSE TOPICS

Quantitative methods will explore the following topics: learning to think statistically, summarizing data, centre and dispersion, probability sampling and weighting, population estimates, relationships between categorical variables, comparing two means, comparing more than two means, relationships between ratio variables, introduction to regression.

COURSE READINGS

The course will rely predominantly on instructor-developed slides and in-person labs. There will be additional readings available to students to see examples of different quantitative methods in published urban planning scholarly work.