

ENST 5050 – QUANTITATIVE RESEARCH METHODS (WINTER 2019)

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Text: Roberts, Kampen and Peter (2010), *The Statistics Coach: Learning Through Practice*, Oxford University Press.

An additional text on the practice of statistics should also be in your possession.

Course Objectives

The central goal of this course is to explore and analyze quantitative research methodologies in the context of environmental studies. The intentions are to assist students in identifying obstacles and limitations that frequently arise when conducting quantitative research, and to encourage them to interact with other graduate and faculty researchers who may have expertise that can prove valuable to their career. Students will develop renewed confidence in their ability to incorporate these concepts into their theses.

A secondary goal is assisting in the production of the thesis research plan. Students are expected to participate in the LU Graduate Student Conference on the week of March 5. Formal research plans will be presented as part of faculty presentations later that month.

Course Description

Meetings in this course will generally consist of instruction and slideshows, although interaction is encouraged. The material will be put into practice through the completion of assignments and the context of developing thesis research plans. *It is expected that students will be in regular contact with their thesis advisors in developing their plan.* Included in the regular course meetings will be lab sessions for exploring software such as SPSS, Excel and ArcGIS.

Evaluation Scheme	Weight	Due Dates
Assignment 1	5%	January 31
Assignment 2	5%	February 14
Assignment 3	5%	February 28
Graduate Student Conference	5%	February 27-28
Assignment 4	5%	March 14
Assignment 5 (GIS)	5%	April 4
Assignment 6	10%	April 11
Participation	10%	
Proposal Presentation	20%	TBA
Examination	30%	TBA

Resources

Lecture slideshows, assignment information, and solution sets will all be posted to Courselink (Desire2Learn). Software is available in the computer labs on the third floor of ATAC, and can be acquired for personal computers. The HelpDesk has schedules of lab availability.

Please come and see me if you need help.

Room and Time

Thursdays, 1:30-4:30, in RC 2005 unless otherwise indicated.

Syllabus (*subject to change*)

Date	Topic(s)
January 10	Introduction and discussion of thesis topics and objectives.
January 17	Review of Descriptive Statistics.
January 22	[Tuesday, 1-4, ATAC 3009] Introduction to SPSS.
January 31	Probability, Distributions, and Sampling.
February 7	Bivariate Analysis and Crosstabulation.
February 14	Correlation and Regression.
February 21	Reading Week. No session this week.
February 28	<i>LU Graduate Student Conference. No session this week.</i>
March 7	Inferential Statistics: Samples to Populations.
March 14	Hypothesis Testing and Parametric Distributions
March 19	[Tuesday, 1-4, ATAC 3009] Geographical Information Systems.
March 28	Multivariate Inference and ANOVA
April 4	Working with Small Samples: Non-Parametric Tests.

Sessions marked [3009] will take place in ATAC 3009 on Tuesdays from 1-4.