NECU 5030 – QUANTITATIVE METHODS IN ENVIRONMENTAL AND CULTURAL RESEARCH (WINTER 2018)

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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 30
Assignment 2	5%	February 13
Assignment 3	5%	February 17
Graduate Student Conference	5%	March 6-7
Assignment 4	5%	March 13
Assignment 5 (GIS)	5%	April 3
Assignment 6	10%	April 10
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.

Syllabus (*subject to change*)

Date	Topic(s)
January 9	Introduction and discussion of thesis topics and objectives.
January 16	Review of Descriptive Statistics.
January 23	[3009] Introduction to SPSS.
January 30	Probability, Distributions, and Sampling.
February 9	Bivariate Analysis and Crosstabulation.
February 13	Correlation and Regression.
February 20	Reading Week. **No session this week.**
February 17	Inferential Statistics: Samples to Populations.
March 6	*LU Graduate Student Conference*. **No session this week.**
March 13	Hypothesis Testing and Parametric Distributions
March 20	[3009] Geographical Information Systems.
March 27	Multivariate Inference and ANOVA
April 3	Working with Small Samples: Non-Parametric Tests.

Sessions marked [3009] will take place in ATAC 3009 at a time to be arranged