

Geography 2210b
Quantitative Analysis in Geography
2013
The University of Western Ontario

Instructor: Dr. M.B. Green 2415 SSC, x85025 mbgreen@uwo.ca
Office hours: Tuesdays 1:00 to 2:30
Classroom and time: Lecture: Tuesday 10:30-12:30, B&GS-0165
Labs: Monday, 11:30-1:30, 1:30-3:30 SSC 3006

Teaching Assistants: TBA
2 lecture hours and 2 lab hours.

Course description: Simple parametric and nonparametric statistical methods through multiple regression are introduced. Exploratory data analysis techniques may be examined as a supplement to more traditional statistical methods. Geography specific techniques are also presented.

Goals: To gain knowledge regarding the nature of geographical data and the application of statistical techniques and computing systems to spatial analysis; models of spatial data, probability, distributions, hypothesis testing and correlations. What that means is that I want you to become comfortable with opening a medium level stats books and being able to follow the discussion of a technique well enough that you could apply it correctly.

A good quality nonprogrammable calculator is a necessity.

Policies

Evaluation: There will be 6 quizzes of no more than 50 minutes each, and an optional final exam. The quizzes will consist of short answer questions and problem solving. Lab in class work assignments will be assigned and introduced on the Tuesday the week before the week of the lab.

The quizzes and final exam are open book. You may use a nonprogrammable calculator for the quizzes and final but you may not use a laptop computer.

If you miss a quiz, for any reason, other than medical, it is assumed it will be the quiz to be dropped from your grade calculation.

Distribution of marks

Attendance Marks - you will receive a 1% contribution to your final mark for every lab work session you attend (meaning the one you are assigned to) for a total of 12%. This means attendance of at least 30 minutes. The other 88% will be from the quizzes and if you choose, the final exam.

Quizzes will not be reevaluated after 2 weeks from the date the quiz was given. Quizzes will be short answer or multiple choice. Quizzes may include material from previous lectures already tested with previous quizzes and any posted presentations

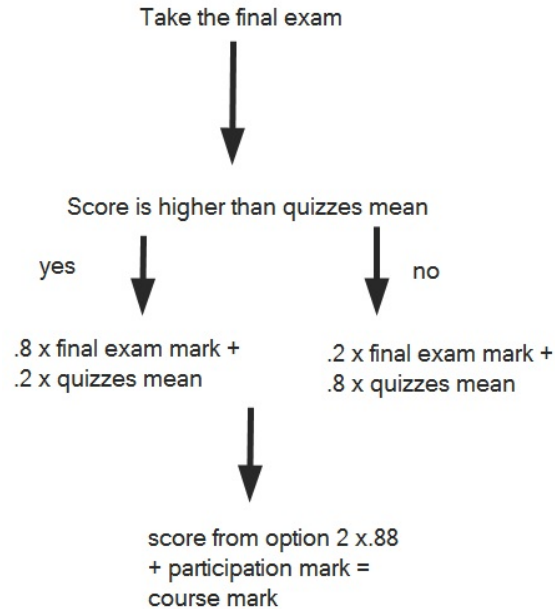
Option 1:

If you don't want to take the final exam, the following determines your grade: sum of (1% of final mark for each lab workshops attended) + (top 5 quizzes x .16 each, + lowest quiz x 0.08)

Option 2:

If you aren't happy with your course mark you can take the final exam to try to improve it. This is not without risk.

You face 2 possible outcomes:



so there is a risk in taking the final exam of lowering your mark

You have the option of having your course mark based on your quizzes and lab participation alone as in option 1, or the score determined as outlined in the figure above, as in option 2. **If you take the final exam, you are committed to option 2.**

It is your responsibility to ensure your participation in the lab workshops is recorded

Copies of the labs are available on this site, Lab exercises consist of a number of statistics problems on the lecture topics currently being covered. You are encouraged to work on labs in groups for the lab.

This does not mean copying labs but helping each other understand the material.

Statement on Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

<http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf> .

You should also note that any marks in the course are considered preliminary until you receive your final mark from

the Registrar. Adjustments of marks may be made before final submission to the Registrar.

In addition you are expected to attend the lectures. You can't learn the material if you aren't there. If you have a cellular phone with you in class, TURN IT OFF!

There is zero tolerance for cheating. First offence is a zero on the quiz, second offence is a recommendation for disenrollment from the class.

General Information

The course is quantitative. Computations will be performed manually, using calculators, and with computers. PASW v18 will be the main computer program used in the course. You can use Excel if you want but it's not recommended.

The course material is cumulative- you will need to know last week's lecture in order to understand this week's lecture. Because of this you should review lectures and readings weekly - do not expect success if you only study and practice before exams. The course is also problem based, and applied - you must practice problems and do all of the exercises in order to fully understand the material and successfully complete the course.

If you are having problems, SPEAK UP! I am more than happy to help you with difficulties you are having in the course. This help is conditional upon you doing your job. That is, you should read the notes or lab before you come to see me. The session is much more fruitful if you have tried to understand the material first. I will not redo a class lecture because you didn't attend. Please attend the lectures, it makes everyone's life much easier.

Antirequisites

Biology 2244A/B, Economics 2122A/B, 2222A/B, Health Sciences 3801A/B, MOS 2242A/B, Psychology 2810, 2820E, 2830A/B, 2850A/B, 2851A/B, the former 2885, Social Work 2205, Sociology 2205A/B, Statistical Sciences 2035, 2037A/B if taken before Fall 2010, Statistical Sciences 2141A/B, 2143A/B, 2244A/B, 2858A/B and the former 2122A/B

Prerequisites

1.0 course from Geography 1100, 1300A/B, 1400F/G, 1500F/G or the former Geography 020E; or enrollment in the Major in Physical Geography or in an Honors Earth Science Program for Professional Registration.

Prerequisite checking:

Unless you have the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from you record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

If you find that you do not have the course requisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only help protect your academic record, but will ensure that spaces become available for students who require the course in question for graduation.

Accommodation for Medical Illness

For UWO Policy on Accommodation for Medical Illness and a downloadable SMC see:

http://www.uwo.ca/univsec/handbook/appeals/accommodation_medical.pdf

Downloadable Student Medical Certificate (SMC): <https://studentservices.uwo.ca> under the Medical Documentation heading

Students seeking academic accommodation on medical grounds for any missed tests, exams, participation components and/or assignments worth 10% or more of their final grade must apply to the Academic Counseling office of their home Faculty and provide documentation. Academic accommodation cannot be granted by the instructor or department.

Statement on Use of Electronic Devices

Electronic devices may **not** be used during any portion of this course without the instructor's permission

Western's commitment to accessibility

The University of Western Ontario is committed to achieving barrier free accessibility for persons studying, visiting and working at Western.

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.

Code of conduct: Students in geography are expected to conduct themselves in a polite and civil manner. Students are reminded of the University Code of Conduct for Students: <http://www.uwo.ca/univsec/board/code.pdf>

Outline

Jan 8:	Introduction, central tendency, <i>What's statistics video</i> ,
Jan 15	primitives, distance
Jan 22:	chi square, means, 2 way chi-square, <i>normal distribution clip</i> , Quiz 1
Jan 29:	measures of association
Feb 5:	t-test, <i>Question of Causality</i> video clip, <i>Significance tests video clip</i> , Quiz 2,
Feb 12:	Nearest neighbour analysis, <i>proportions video</i> , <i>inference around 1 mean video</i>
Feb 19:	Reading week
Feb 26:	Quadrat analysis, nearest neighbour, Quadrat analysis, k-s test, quiz 3
Mar 5:	1-way anova, <i>Comparing 2 Means</i> video
Mar 12:	K-W test, 2 way anova, another example of 1 way, 2 way ANOVA, quiz 4
Mar 19:	bivariate regression, correlation, cluster analysis,, <i>Scatterplots and regression video clip</i> , quiz 5
Mar 26:	<i>Confidence Interval clip</i> , <i>Inferences about Relationships video</i> Read: Basics of Regression
Apr 2:	Median polish
Apr 9:	quiz 6, smoothing, review
Final	TBA

