

Methods of Analyzing Geographic Data: Laboratory

Geography 316 – Fall 2007

Course Days and Time: W: 8:00 – 9:50; Th: 1:00 – 2:45

Classroom: Lindley 310

Instructor: Jenny Brackhan

Office: Lindley 500

Email: brackhan@ku.edu (e-mail is the best way)

Phone: 864-2473

Office Hours: M: 8:00 - 9:00; Tu: 3:00 – 4:00; Th: 3:00 – 4:00; or by appointment.

COURSE PURPOSE: The lab is designed to allow you to explore some of the concepts learned in lecture with practical experience using commonly available statistical software (SPSS and GeoDa). This will not only solidify major portions of Dr. Slocum's lecture material, but will give you experience with software and datasets that will enable you to solve real-world problems in your future work and/or research.

ATTENDANCE: Attendance during all scheduled classes is essential and expected. Since the labs build on one another, it is important that you attend each lab and not fall behind in the work. If you miss labs, you also miss information, tips, recommendations, and assistance that I would normally provide during that session. Bring your course notes and the lecture notes from class for your benefit and help with each lab.

If you do miss a lab session, for reasons such as illness or family emergency, and need to make it up, you must notify me beforehand (by e-mail/phone) or bring a valid, official note explaining the reason for your absence. **Advanced notice to me about situations that could potentially affect your attendance/performance in lab will be most beneficial to you.**

LAB EXERCISES: Each lab requires you to hand in something to be graded. This will consist of graphs, data tables, maps, statistical analysis output sheets, and/or a written summary/exploration of what you learned in lab. Labs are **due at the beginning** of the lab period one week after they are assigned (see schedule), unless otherwise noted. Late labs will be docked 10% for each day they are late. After 10 days, I will review the lab for your benefit, but you will receive a **zero** for that lab. Make-up labs are only possible if you give me advanced notice.

GRADING: Your overall laboratory grade counts for 20% of your final grade in GEOG 316. There will be approx. 12 labs (see schedule), each worth 10 points. Late labs will be penalized as noted above.

ASSISTANCE: I encourage you to contact me during my office hours (or other arranged time) to discuss any questions or problems that we can't solve or get through during lab time. I will NOT, however, use my office hours as a substitute for lab time. I am more than happy to work with you outside of class, but I will give priority to those students who are actively participating in and attending scheduled lab sessions. **Some material in the lab can be difficult to understand at first, so seek help early and as often as you need.**

COMPUTER LAB: Access to the lab room and computers is controlled by a door code and user name/password. This information will be provided to you on the first day of class. These computers are for lab and class purposes. **They are not your personal computers.** Therefore, I expect them not to be used for other-than-class purposes (e.g., internet games, etc.). Email usage is acceptable.

Your data for lab and class will be stored in a personal folder on the computer's data drive. No data should be stored on the main data drive (i.e., C:\, desktop, My Documents, etc.). Other storage and data transfer options include burning CDs/DVDs or use of a USB flash drive.

You must provide a means of backing up your work on the computers after each session. A USB Flashdrive with 64mb (or more) of memory is most convenient and reliable, however recordable CD's can work as well. **You are responsible for reproducing any work lost in the event of missing, deleted, or corrupted files.**

ACADEMIC MISCONDUCT: Academic dishonesty/misconduct **will not be tolerated in any way.** Those caught will be dealt with according to departmental and university policies (see <http://www.ku.edu/~handbook/codes.shtml>).

This is a laboratory where you can and should discuss things with your classmates for help/clarification on lab work. But, you must do the work and turn in **YOUR OWN INDIVIDUAL RESULTS**. Unacceptable actions include, but are not limited to:

- copying or paraphrasing an answer developed by another student (current or former)
- modifying or using graphics developed by another student (current or former) and turning it in as your own work

**Any student who has a disability that may prevent him/her from fully demonstrating his/her abilities should contact me personally as soon as possible so that we can discuss accommodations necessary to ensure full participation and facilitate the educational opportunity.*

MISCELLANEOUS: (1) Keep your registered email for KU updated, as I will use that for any necessary communication. (2) Please be respectful when one of your classmates or myself is talking during discussions. (3) Turn off phones/pagers and put away newspapers while in class. (4) Please see me with any concerns or problems. (5) I am more than willing to help with any questions over the material (not to redo a lab) so see me during my office hours. That's what they are there for.

SCHEDULE OF LABS:

**This syllabus (especially the schedule below) is subject to change. You will be given all possible advance notice in those circumstances.*

Date:	Lab #:	Lab Exercise Topic:	Turn In:
Aug. 22 & 23		Introduction to SPSS	
Aug. 29 & 30	Lab 1	Exploring Data Sets I	Intro. Lab
Sept. 5 & 6	Lab 2	Exploring Data Sets II	Lab 1
Sept. 12 & 13	Lab 3	Data Transformations/Data Mapping in GeoDa	Lab 2
Sept. 19 & 20	Lab 4	Stem & Leaf, Box Plots	Lab 3
Sept. 26 & 27	Lab 5	Random Num., Uniform Dist., Nearest Neighbor Index/Adding and Analyzing Data in GeoDa	Lab 4
Oct. 3 & 4	Lab 6	Multivariate Analysis/Scatterplots in GeoDa	Lab 5
Oct. 10 & 11		No Lab – Fall Break	
Oct. 17 & 18	Lab 7	The Ideal City	Lab 6
Oct. 24 & 25	Lab 8	Cartograms in GeoDa	Lab 7
Oct. 31 & Nov. 1	Lab 9	Selection, Linking, and Brushing in GeoDa	Lab 8
Nov. 7 & 8	Lab 10	Conf. Intervals, Sampling Dist., and Hypothesis Testing	Lab 9
Nov. 14 & 15	Lab 11	Difference of Means Test	Lab 10
Nov. 21 & 22		No Lab – Thanksgiving Break	
Nov. 28 & 29	Lab 12	Correlation and Regression	Lab 11 & 12
Dec. 5 & 6	Lab 13	Trivariate Analysis of Kansas Counties	Lab 13