

Fall 2016

GEOG 247--Intermediate Quantitative Methods in Geography

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EN/GEOG 247/347/IDCE 324
Intermediate Quantitative Methods
Fall Semester 2016
Course Syllabus

INSTRUCTOR: Samuel Ratick
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Office Hours: Thursdays 12:00-2:00pm
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LECTURES: Tuesday & Friday 12:00 - 1:15 PM Jefferson 222
LABS: Monday 10:00 - 11:50 AM JC 105
Wednesday 9:00 - 10:50 AM BP 310

Required Material for the Course:

Hair, Anderson, Tatham, and Black. (latest edition). *Multivariate Data Analysis: With Readings*.

Materials on Reserve (Some Copies on Moodle):

Piele. 1990. *Introductory Statistics with Spreadsheets*. Selected Chapters.

SPSSX-PC User's Manual. Selected Chapters.

Mason, Lind, and Marchal. 1994. *Statistics: An Introduction*. Selected Chapters.

Cohen and Cohen. 1975. *Applied Multiple Regression/ Correlation Analysis for the Behavioral Sciences*. Chapters 3 and 4.

Chatterjee and Price. 1980. *Regression Analysis by Example*. Chapters 2, 5, and 6.

Clark and Hosking. 1986. *Statistical Methods for Geographers*. (Book on reserve)

Kleinbaum, Kupper, and Muller. 1988. *Applied Regression Analysis and Other Multivariable Methods*. (Book on reserve)

Grades will be determined by:

Lab Assignments	40%
Mid-Term Exam	15%
Final Project	45%

TENTATIVE CLASS SCHEDULE			
Date	Lecture Topic	Readings	Corresponding Lab
Aug. 30	Introduction and Overview	None	None
Sept. 2, 6, 9, 13	Review of Basic Statistics, Hypothesis Testing, Introduction to Regression Analysis	On Moodle: September 2 Block Review_of_Basic_Statistics	Lab 1
Sept. 16, 20, 23, 27	Bivariate Regression Analysis Analysis of Variance	Piele – Chapter 13 Chatterjee and Price- Chapters 2 and 6	Labs 2 and 3
Sept. 30	Bivariate Regression MID-TERM EXAM	Take-home exam; 1 week to complete.	
Oct. 4, 7, 14, 18	Multivariate Regression Analysis	Hair, et al. - Chapters 4 (Optional Chapters. 1-3)	Labs 4 and 5
Oct. 21	Special Topics in Multivariate Regression Analysis	Hair, et al.- Chapter 4	Lab 6
Oct. 25, 28	Cluster Analysis	Hair, et al.- Chapter 8	Lab 7
Nov. 1	Project Discussion	Description of Project	None
Nov. 4,8	Discriminant Analysis	Hair, et al.- Chapter 5	Lab 8
Nov. 11, 15	Maximum Likelihood Estimators, and Logit and Probit Models	Hair et al. – Chapter 5 Readings to be Assigned	Lab 9
Nov 18, 22	Principal Component and Factor Analysis	Hair, et al - Chapter 3	Lab 10
Nov. 29 Dec. 2,6,9	Temporal and Spatial Analysis	Miori, Klimberg and Ratick- Chapter on Forecasting. Clark and Hoskings, Assigned Papers	To be Announced

Estimated Work Required Per Week:

Activity	Time	Total/Week
Class Lectures	2 X 75 Min	150 Minutes (2.50 Hours)
Class Preparation	2 X 75 Min	150 Minutes (2.50 Hours)
In Lab Time	1 X 110 Min	110 Minutes (1.83 Hours)
Lab Assignment Time	1 X 255 Min	255 Minutes (4.25 Hours)
Weekly Total Time Lectures and Labs		665 Minutes (11.08 Hours)
Final Project	200 Min	200 Minutes (3.33 Hours)
Totals		865 Minutes (14.42 Hours)

Important Semester Dates: Sept. 7 Labor Day no classes; October 12-13 Fall Break – No Classes; October 30 last day for undergraduates to withdraw from class with a W; Nov. 24 – 25 Thanksgiving University Holidays: no classes; Dec. 7 last day for graduate students to withdraw from class with a W; Dec. 7 last day of classes.

Students with Disabilities

If you require accommodations in this course due to a disability, you must be registered with the Student Accessibility Services office. For information, please contact Adam Kosakowski, Director of Student Accessibility Services, at 508-798-4368 or at AKosakowski@clarku.edu.