

COURSE SYLLABUS

Urban and Regional Planning 5211—Statistics

Fall 2007

Course Information

Time: Monday and Wednesday, 9:05 am to 10:20 am
Classroom: HCB 216
Required lab session: Friday, 8:00 am to 8:50 am or 9:05 am to 9:55 am
Lab location: Bellamy 035

Contact Information

Instructor: Jeffrey Brown
Office: 345 Bellamy
E-mail: jbrown2@fsu.edu
Phone: 644-8519
Office hours: Mondays and Wednesdays 1 pm to 2:30 pm, or by appointment
Computer Lab TA: Gabrielle Matthews

Description

This course provides urban and regional planning students with an introduction to the practice of statistical analysis. You will learn the basic techniques of descriptive and inferential statistics that are used by practicing planners throughout the profession.

Because this is an introductory class, **no previous knowledge of statistics is required.**

Objectives

At the conclusion of this course, you will be able to:

1. Distinguish between descriptive and inferential statistics
2. Calculate measures of central tendency and dispersion
3. Identify the basic theoretical assumptions that underlie inferential statistics
4. Construct confidence intervals for a mean and a proportion
5. Test hypotheses
6. Calculate measures of association between two variables
7. Perform simple linear regression and interpret regression results
8. Perform multivariate regression and interpret regression results
9. Use the SPSS computer package to perform basic statistical analysis
10. Organize, present, and interpret statistical data effectively and accurately

Course Organization

The course is divided into three parts (see attached course calendar for details):

1. Descriptive statistics (weeks 1 – 4)
2. Inferential statistics (weeks 5 - 9)
3. Bivariate and multivariate analysis (weeks 10 –15)

The course consists of both lectures and required lab sessions. In the lectures, I introduce statistical techniques and discuss their conceptual foundations. We will also work through a number of in-class exercises that apply the various techniques to small data sets. In the lab sessions you learn to apply these techniques to larger, more realistic data sets using the SPSS (Statistical Package for the Social Sciences) computer package.

Lab Sessions

The weekly lab session attached to this course is required. You can attend this session on Fridays from 8:00 am to 8:50 am or 9:05 am – 9:55 am in Bellamy 035 (*note: location may change*). During these sessions, the class will work as a group on a series of in-lab computer exercises that illustrate how SPSS is used to conduct many of the analyses we introduced in the lecture sessions. You will also complete a series of lab practica, on your own, that employ the SPSS skills covered in the labs.

Be forewarned: These sessions are not intended as free lab time during which you can work on your lab practica assignments. They serve as additional instruction time the class will use to introduce you to SPSS and its statistical functions. You will need to spend additional computer time (outside class) completing the lab practica.

You can work on the lab practica during open lab hours in the Social Sciences computer lab (Bellamy 040) or in the Department of Urban and Regional Planning's (DURP) computer lab located on the third floor of the Bellamy Building (Bellamy 332). Consult the computer labs for their scheduled hours.

Course Materials

Textbook and Readings

There is one **required** text for this class:

Statistical Methods for the Social Sciences, Third Edition (1997), by Alan Agresti and Barbara Finlay (referred to as “**A & F**” in all course materials).

This text may be purchased from either the FSU Bookstore or Bill's Bookstore on Copeland.

You do not need to purchase a textbook for the computer lab. I will make my personal copy of *SPSS Guide to Data Analysis* available as a reference in the DURP lab. I will also provide handouts of relevant material for the lab sessions.

I will periodically assign readings from published research during the course of the semester. These readings will be used to illustrate planning-related applications of the concepts discussed in class lectures.

A Note about the SPSS Student Version

I do not require you to obtain a copy of the student version of SPSS. Those of you who choose to obtain a copy should know that, while it is a useful analytic tool, it is limited both in terms of the size of the data sets it can analyze and its graphical capabilities. You may not be able to complete some lab practica using the student version of SPSS. You should complete your lab practica using the full versions of SPSS that are installed in the Social Sciences and DURP computer labs.

Blackboard

We will use Blackboard, a web-based instructional medium, as our course communication and information center. I will post copies of this syllabus, the course calendar, lab practica, practica data sets, web site links, and other useful items on our class site. You can reach the class Blackboard site from <https://campus.fsu.edu>

To access Blackboard you must have an FSU e-mail account. Your FSU e-mail name and password are required to log into the system. Non-FSU e-mail accounts will not work. To obtain an FSU e-mail account, visit:

https://register.acns.fsu.edu/CARS/new_accounts.html

Course Policies

Assignments, Exams, and Grading

Your grade will be based on three exams (one for each part of the course), four computer lab practica, a final computer lab project, class attendance, and participation. We will also have several take-home and in-class exercises as part of the lecture sessions.

Grading		Letter Scale	
Lab Practica (4 @ 5% each)	20%	96% and above	A
Regression Lab Project	8%	91% - 95.9%	A-
Exam 1	23%	87% - 90.9%	B+
Exam 2	23%	84% - 86.9%	B
Exam 3	23%	80% - 83.9%	B-
Attendance	<i>see below</i>	76% - 79.9%	C+
Participation (labs and class)	3%	73% - 75.9%	C
		70% - 72.9%	C-
Total	100%	66% - 69.9%	D+

Lab practica due dates will be posted at the top of each handout. All lab practica must be typed. Late lab practica will be penalized 5 points for each day they are late.

Do not e-mail your class assignments. I will not accept e-mailed assignments. You must deliver a hardcopy printout to class or, if late, to my mailbox.

The due dates for all assignments will be announced in class.

Fairness

It is unfair to other students in the class for you to ask for a deadline extension except when justified by extenuating circumstances.

I also discourage make-up exams and will give them only when justified by extenuating circumstances. If you miss an exam, you must leave me a message, by the time of the exam, saying you will not be there and why. Also leave your phone number(s) and times you can be reached.

Readings

You are expected to complete the assigned readings prior to attending class. Failure to do so makes it difficult for you to understand the materials presented in the lecture or to fully participate in class discussions.

Attendance

Attendance at all classes and lab sessions is mandatory. Unexcused tardiness or early departure from class will be recorded as absence. Unless approved by the instructor ahead of time, all absences will be unexcused. **Three unexcused absences will result in the loss of a letter grade in the class. Five unexcused absences will result in failure of the course.** The following and only the following absences are eligible to be excused: religious holidays, as specified in FSU policy; absences due to representing FSU at official functions, including intercollegiate debating or varsity sports events; and verified emergencies and/or illness. While one is not penalized per se for excused absences, s/he

is nevertheless responsible for all content missed, including any assignments, knowledge, or skills covered or assigned.

Collaboration

You are encouraged to discuss material covered in class lectures, readings, and the computer lab with your fellow students. But all work you complete for class assignments are required to be solely your own work. Evidence of excessive collaboration will be dealt with in accordance with the university rules regarding academic dishonesty.

Students with Disabilities

Students with disabilities needing academic accommodation should:

1. Register with and provide documentation to the Student Disability Resource Center (SDRC phone: 644-9566 (voice), 644-8504 (TDD), web page: <http://www.fsu.edu/~staffair/dean/StudentDisability/>)
2. Bring a letter to me from SDRC indicating you need academic accommodations. This should be done during the first week of class.

Florida State Honor Code

Students are expected to uphold the Academic Honor Code published in *The Florida State University Bulletin* and the *Student Handbook*. The Academic Honor System of The Florida State University is based on the premise that each student has the responsibility to:

1. Uphold the highest standards of academic integrity in the student's own work
2. Refuse to tolerate violations of academic integrity in the academic community, and
3. Foster a high sense of integrity and social responsibility on the part of the university community

Any violation of the code, such as plagiarism (copying someone else's work and presenting it as your own, paraphrasing someone else's work without proper attribution) or cheating, will not be tolerated in this class. Violations will result in a grade of "F" for this course.

If You Have Any Questions or Concerns, See Me

Many of you may be uncomfortable about taking a statistics class. Perhaps you haven't taken a math class for a number of years. Perhaps you have a slight case of math phobia. Whatever the reason, I want to do what I can to help. Rest assured that (1) this truly is an introductory-level class and (2) my objective is to help you learn the material.

If you have any questions or concerns about the course material or your performance in the class, please see me during my office hours. If you can't come during scheduled office hours, call me (644-8519) or e-mail me (jbrown2@fsu.edu) to schedule an appointment. I encourage you to see me as soon as possible, so I can do what I can to help make the class a rewarding experience—and not just a required one.

Urban and Regional Planning 5211 Statistics
Course Calendar for Fall 2007

8/13/07 Version

Week	Lecture 1	Lecture 2	Readings	Problem Sets	Lab Topics	Assignments
1 August 27th - August 31	8/27: Course overview, uses of statistics in planning	8/29: Description versus inference, population versus samples, parameters versus statistics	A & F pp. 1-9	A & F (1) 1-5, 9	8/31: Introduction to SPSS, basic descriptive statistics (charts and frequencies)	
2 September 3rd - September 7th	9/3: Labor Day Holiday	9/5: Variables and Scales of Measurement	A & F pp. 12-17, pp. 28-29	A & F (2): 1-9	9/7: No Lab (FAPA Conference)	
3 September 10th - September 14th	9/10: Scales of Measurement, Discrete versus Continuous Variables	9/12: Measures of Central Tendency (Mean, Median, Mode)	A & F pp. 35-55	A & F (3): 22-25, 29, 33-34, 43, 49, 53	9/14: Graphic Techniques	
4 September 17th - September 21st	9/17: Measures of Central Tendency Continued	9/19: Measures of Variation	A & F pp. 56-67	A & F (3): 22-25, 29, 33-34, 43, 49, 53	9/21: Data Entry and Variable Transformation	Practicum 1 due 9/21 by 5pm
5 September 24th - September 28th	9/24: Inference (Random Sample, Probability Distribution)	9/26: Exam 1	A & F pp. 17-22	A & F (2): 10-13	9/28: Central Tendency and Dispersion	
6 October 1st - October 5th	10/1: Inference (Probability Distribution and Sampling Distribution)	10/3: Inference (Sampling Distribution)	A & F pp. 80-94	A & F (4): 1-3, 9, 10, 15, 16, 21-25, 31	10/5: Random Sample	
7 October 8th - October 12th	10/8: Inference (Sampling Distribution (cont))	10/10: Univariate Analysis (Point estimation)	A & F pp. 94-111, A & F pp. 121-125	A & F (4): 38-40	10/12: Normal Distribution and standardized scores	Practicum 2 due 10/12 by 5pm
8 October 15th - October 19th	10/15: Univariate Analysis (Confidence Intervals)	10/17: Hypothesis Testing 1	A & F pp 125-141	A & F (5): 1,6,7,8, 24, 26, 27, 29	10/19: Confidence intervals, selecting sample sizes	
9 October 22nd - October 26th	10/22: Hypothesis Testing 2	10/24: Small-Sample Inference	A & F pp 154-198	A & F (6): 1-3, 5, 6, 11, 12, 14, 16, 28-30	10/26: Hypothesis Testing	
10 October 29th - November 2nd	10/29: Exam 2	11/1: Bivariate (Categorical Variables 1)	A & F pp. 248-286	A & F (8): 2, 4, 5, 28	11/2: No Lab Session	Practicum 3 due 11/2 by 5pm
11 November 5th - November 9th	11/5: Bivariate (Categorical Variables 2)	11/7: Linear regression and correlation	A & F pp. 301-318	A & F (8): 2, 4, 5, 28	11/9: Bivariate Analysis	
12 November 12th - November 16th	11/12: Holiday	11/14: Linear regression and correlation	A & F pp. 318 - 342	A & F (9): 1-5, 11, 32, 36, 37	11/16: Linear Regression Part 1	Practicum 4 due 11/16, Final Project Proposal due 11/16--both by 5pm
13 November 19th - November 23rd	11/19: Linear Regression and Correlation	11/21: Linear regression and correlation	A & F pp. 382-398	A & F (9): 1-5, 11, 32, 36, 37	11/23: Holiday (No Lab)	
14 November 26th - November 30th	11/26: Multivariate Analysis	11/28: Multivariate Analysis	A & F pp. 382-398	None	11/30: Linear Regression Part 2	
15 December 3rd - December 7th	12/3: Multivariate Analysis	12/5: Wrap-up--application	None	None	12/7: Review Session (in lieu of lab)	Final Project Paper due 12/7 by 5pm
FW Finals Week	Final: Thursday, December 13th, 3pm to 5pm					

Note: This schedule is subject to change based on class needs