

PLAN 601: Planning Methods

Fall 2014
M 9:00-11:45am
Saunders 116

Office Hours
W 10am-12pm or by Appointment

Instructor: Suwan Shen
Assistant Professor
Urban and Regional Planning
suwans@hawaii.edu

Teaching Assistants: Julia Crowley
Office Hours W 1pm - 4 pm, Saunders 342
crowleyj@hawaii.edu

Course Description

This course is intended to provide students with an introduction of the basic methods in planning, including research design, survey methods, statistical analysis, hypothesis testing, and various fundamental data analysis techniques and statistics skills required by the planning program and by the planning profession. The course supports the department's mission as a core course in the department's curriculum, and provides a foundation for more advanced methods classes in planning, such as PLAN 605, 654, and 655. It is required for the Master in Urban and Regional Planning and fulfills one of the core requirements of the Certificate in Public Policy Studies.

Learning Outcome

Upon completion of this course, student should be familiar with the use of descriptive statistics, statistical inference, and multivariate analysis. In addition, through course projects students will gain competence in applying these methods to support planning problem analysis and improve their basic planning professional methods.

Course Requirements & Grading Policy:

Grading will be based on an evaluation of the following:

Lab Participation and Completion	20%
Online Discussions	10%
Assignments	20%
Exam	20%
Final Project	30%

Grading based on points earned as a percentage of total points.

A+: 97 and up, A: 94-96, A-: 90-93, B+: 87-89, B: 84-86, B-: 80-83, C+: 77-79, C: 74-76, C-: 70-73, D+: 67-69, D: 64-66, D-: 60-63, F: 59 or below.

Class Attendance and Participation:

An important requirement for this course is class attendance and participation. Attendance is mandatory on time. Students are expected to attend all classes and labs and to stay until the class/lab period ends. If you expect to miss a class for legitimate reasons (e.g. medical or family emergency, conference), please notify the instructor via e-mail in advance of class time. Otherwise, excessive absences will justify a lower grade, expulsion, or a failing grade. While coming to class is important, it is also important to be an active listener and constructive contributor.

Lab Modules

There are nine lab modules and corresponding lab assignments comprising 20% of the grade. Lab modules and assignments consist of attending lab sessions, engaging in practice sets that we will work on as a class and paying attention. No cell phones, texting, facebook, etc is allowed. Failure to adhere to these guidelines will result in lab point deductions, which the TA will acknowledge ahead of time to students. The first module reviews basic spreadsheet. The remaining eight lab modules use SPSS for statistical data analysis. The principal lab will be Saunders 342. The TA will oversee and guide students during the lab sessions. The sole mode of contact for TA after class is by email at crowleyj@hawaii.edu.

Assignments

There will be weekly or bi-weekly assignments. Late assignments will be penalized by an accumulation of 25% per day from the deadline up to a maximum penalty of 100% for each day that assignment is late unless previously arranged with the instructor (with a compelling reason). Incomplete grades will be given only to students with a compelling reason (like extended sickness).

Discussions

Online discussion (in Laulima) is required and will count towards 10% of your grade. The instructor will provide additional information.

Disruptive Behavior and Honor Policy

Students engaging in disruptive behavior will be asked to leave the classroom. Use of cell phones and computers without permission of the instructor is considered disruptive behavior. Students in the Department of Urban and Regional Planning are expected to adhere to all University of academic honesty policies. Any incidence of cheating, copying, signing rosters for others, or other attempts to deceive will be penalized by lowered grades, course failure, and/or referral to the University Honor Court. Students are responsible for reading and abiding by the University's student code of conduct and academic honesty.

http://www.studentaffairs.manoa.hawaii.edu/policies/conduct_code/

Project Paper

The project paper should be between 15 and 20-pages in length, double-spaced, 1-inch margins. This includes a cover page, text, tables, and figures. This does not include references or appendices. All sources, include borrowed tables or figures, must be cited within the text as well as the bibliography. A one-paragraph paper proposal will be due on **September 22th**. A draft of the term paper will be due **November 17th**. The draft should contain an introduction (statement of research question), full literature review, relevant presentation of descriptive statistics, proposed analytical framework and preliminary results if available. Full results and

conclusions are NOT expected. The draft will be graded and account for **5%** of the final grade. It is thus worthwhile to take the draft seriously, using the time in-between the draft and the final report to fine-tune model specification and write-up. In the last two classes, you will give a short presentation (about 15 minutes; the actual time will depend upon the number of students in the course) about your paper. This presentation should include a description of the problem, the method used and a brief explanation of the principal finding. The presentation counts for **5%** of your final grade. Final papers are due at noon on **December 11th**. You must submit an electronic copy of the paper via the E-learning in addition to a hard copy. The final paper is worth the remaining 20% of the grade.

The paper can cover a wide array of topics based on student interest, but must apply tools and skills taught within the course (specifically, must include descriptive statistics and regression analysis). As this requires available data, you may want to use the sample case study on Transportation Preferences and Energy Efficiency to assess various Hawaii-specific transportation questions. This is not a requirement, however, if you have access to other data. Constructing a dataset from scratch is not suggested, given the limited time of the semester. Although the analytical aspects of the paper are quantitative in nature, it should be presented with a full literature review in a coherent manner.

Required Text

Kachigan, S. K. (1986). Statistical analysis: An interdisciplinary introduction to univariate & multivariate methods. New York: Radius Press.
Course Reserve Call # QA278 .K323 1986

Supplementary Reading and Teaching Assistance

Field, A. (2009). Discovering statistics using SPSS. Sage publications.
Course Reserve Call # HA32 .F54 2009

Information regarding Sinclair Library Reserve Unit

<http://guides.library.manoa.hawaii.edu/sinclairlibrary/usingcoursereserves>

Additional readings will be posted in Laulima.

Course Outline

Topic		Reading (After Class)
Week 1 August 25	Course Introduction: Syllabus, Laulima Introduction a. research Design b. basic probability c. survey design	Kachigan, Ch. 1, Ch. 2, 3, 6 Field, Ch.1, 2
Labor Day September 1		
Week 2 September 8	Statistical Analysis a. objective b. logic c. data type d. frequency distribution Lab: 1 Introduction to Excel	Kachigan, Ch. 4, 5 Field, Ch. 3, 4
Week 3 September 15	Descriptive Statistics a. central tendency b. dispersion c. describing data d. normal distribution, z score Lab: 2 Intro SPSS and Descriptive Analysis	Kachigan, Ch. 7, 8 Field, Ch. 5
Week 4 September 22	Sampling distribution a. population vs sampling distribution b. student's t distribution c. standard error d. interval estimate e. parametric analysis Lab: 3 Test of Assumptions	Kachigan, Ch. 9 Field, Ch. 9
Week 5 September 29	Hypothesis Testing a. Classical Hypothesis Testing b. Confidence Levels, Levels of Significance c. Type I and Type II Errors d. Sample Size, Power Lab: 4 T Test (parameter estimation, test of the difference)	Kachigan, Ch. 10 Field, Ch. 6
Week 6 October 6	Correlation Analysis a. patterns of association b. correlation coefficient r c. interpretation and applications Lab: 5 T Test and Correlation	Kachigan, Ch. 13, 11 Field, Ch. 7, 18
Week 7 October 13	Categorical Data Analysis a. Chi square, goodness of fit b. contingency table Regression Analysis	Kachigan, Ch. 11 Field, Ch. 7

	a. Linear Model b. Simple Regression	
	Lab: 6 Chi-square and Simple Regression	
Week 8 October 20	Regression Analysis a. Multiple Regression b. Collinearity c. Dummy	Kachigan, Ch. 12 Field, Ch. 10
	Lab: 7 Multiple Regression	
Week 9 October 27	Analysis of Variance a. F distribution b. one-way ANOVA c. two-way ANOVA	
	Lab: 8 ANOVA	
Week 10 November 3	Exam	Kachigan, Ch. 13
	(Research Design, Descriptive Statistics, Hypothesis Testing: T, Z, Chi-square, ANOVA, Correlation and Regression)	Field, Ch. 18
Week 11 November 10	Logistic Regression	Kachigan, Ch. 19
	Lab: 9 Logistic Regression	
Week 12 November 17	Non Parametric Analysis	Kachigan, Ch. 21
	Lab: Work on Project	
Week 13 November 24	Advanced Topics	
	Lab: Work on Project	
Week 14 December 1		Student Project Presentation in Class
Week 15 December 8		Student Project Presentation in Class
December 11		Final Report Submission Deadline

Syllabus is subject to change by Instructor.

It is likely that changes to the syllabus will be made over the course of the semester. It is the student's responsibility to confirm that the most recent version of the syllabus is being used.