UP 316
Urban Informatics II

Department of Urban and Regional Planning
University of Illinois at Urbana-Champaign
Spring 2017

LECTURES:	Monday and Wednesday, 2:00 – 2:50pm, Room 225 Temple Buell Hall
LABS:	Friday, 2:00– 2:50pm both sessions, Room 29, ACES Library Info & Alum Center
INSTRUCTOR:	Bumsoo Lee, M206 Temple Buell Hall, bumsoo@illinois.edu Office hours: 1:00pm-1:50pm on Monday in TBH M206 and by appointment
TEACHING ASSISTANT:	Faizaan Qayyum, qayyum2@illinois.edu Office hours: 1:00pm-1:50pm on Wednesday in TBH 227 and by appointment

COURSE OVERVIEW

Any successful urban planning process requires *information* on the current and future conditions of the community and region. UP 316 is designed to teach formal planning methods that help planners collect and analyze critical information for various urban planning projects. The first half of the semester will focus on a primary data collection method, survey research. Students will learn how to design and administer an effective sample survey and how to analyze and interpret survey results. Students will also have a hands-on experience of conducting their own sample survey research as a group project. The second half of the course will focus on other quantitative analytical techniques that are widely used by planners to understand demographic and socio-economic conditions of a city and its future.

Among the topics to be covered are:

- Survey research – questionnaire design, administering survey, data analysis& report writing
- Review of statistical tools and their application to survey research
- Demographic analysis and population projection methods
- Economic analysis techniques: economic base model and shift-share analysis
- Cost-benefit analysis as a project evaluation method
- Using MS-Excel and SPSS for urban data analysis

Monday and Wednesday classes are in a lecture/discussion format. Students will learn and discuss fundamental concepts, theories, and tools of *urban informatics*. In Lab sessions on Friday, students will have opportunities to apply these tools using real world data and computer programs. The best way to learn planning methods is *learning by doing*. Thus, various exercises and assignments will be given throughout the semester.

Students should read required readings, be prepared for class, and actively participate in class discussions. All the lecture notes will be posted on the Compass course webpage (https://compass2g.illinois.edu)so that students can reduce the need for note taking and more actively participate in class discussion.

PREREQUISITE

UP 116 Urban Informatics I or an equivalent introductory statistics course.

TEXTBOOKS

Rea, Louis M. and Richard A. Parker.2014.*Designing and Conducting Survey Research: A Comprehensive Guide*, 4th edition. San Francisco, CA: Josey-Bass Inc. E-book available at UIUC Library https://vufind.carli.illinois.edu/vf-uiu/Record/uiu_7611907.

Wang, Xinhao and Rainer vomHofe. 2007.*Research Methods in Urban and Regional Planning*. Berlin, Germany: Springer. E-book link: http://www.springerlink.com/content/m50327/#section=301719&page=1.

Additional reading assignments or the links to them will be posted on the Compass course webpage (https://compass2g.illinois.edu).

REQUIREMENTS

Students will be required to complete one group project, one exam and a series of homework/lab assignments. Class participation grade will be based on both random attendance checks and class participation. Poor attendance will not result in automatic failure, but 10% participation/attendance grade can be significant in your final grade. Class participation grade will also be affected by class distracting behaviors such as tardiness and texting. Laptop computers should be used only for note taking, not for web surfing.

GRADES will be assigned as follows:

Group Project: Student Attitude Survey	20 %
Mid-term EXAM	25 %
Homework/Lab Assignments	45 %
Participation/Attendance	10 %

EXAMS: Since there is NO final exam, students are expected to commit more time and efforts to complete homework assignments and a group project.

ASSIGNMENTS and PROJECTS: In general, assignments are due at 2pm (class time) on the due date. Late homework assignments will be graded down by 10% per day up to 50%. There may be in-class or in-lab homework assignments. So if you miss these classes/lab sessions, you will not receive any credit for those assignments without a valid excuse for your absence. Detailed guides for projects/assignments will be handed out later.

RUBRIC: The general grading rubric for assignments and projects is as follows:

A: Demonstrates original thought and synthesis of ideas and cogent analysis, and is clearly written and presented. Outstanding work.

B:Presents above average analysis with appropriate evidence to support ideas, and is clearly written or presented. Good work.

C:Shows a basic level of understanding, with analysis limited to obvious arguments. Writing is competent. Adequate work.

D:Misunderstands or misrepresents the material, or is so poorly written or presented as to obscure the analysis. Inadequate work.

GRADING POLICIES

Transformation of numerical grade to letter grade will be according to the schedule below:

A+	97-100		
A	93-96.9	C+	77-79.9
A-	90-92.9	C	73-76.9
B+	87-89.9	C-	70-72.9
B	83-86.9	D+	67-69.9
B-	80-82.9	D	60-66.9

OTHER POLICIES

SPECIAL ACCOMMODATIONS

This course will accommodate students with documented disabilities. Please refer to http://www.disability.uiuc.edu/resourceguide for more information and provide the appropriate documentation at the beginning of the semester.

ACADEMIC INTEGRITY

This course follows the guidelines set forth by the University student code. See http://www.admin.uiuc.edu/policy/code/article_1/a1_1-401.html for specific guidelines, examples, and punishment associated with academic dishonesty.

CLASS CLIMATE

The Department of Urban and Regional Planning (DURP) is committed to creating an environment of inclusion and opportunity that is rooted in the very goals and responsibilities of practicing planners. Conduct that interferes with the rights of another or creates an atmosphere of intimidation or disrespect is inconsistent with the environment of learning and cooperation that the program requires. By enrolling in a course in the Department of Urban and Regional Planning, students agree to be responsible for maintaining a respectful environment in all DURP activities, including lectures, discussions, labs, projects, and extracurricular programs. We will be governed by the University Student Code. See Student Code Article 1—Student Rights and Responsibilities, Part 1. Student Rights: §1-102 In the Classroom.

EMERGENCY RESPONSE RECOMMENDATIONS

The Department of Homeland Security and the University of Illinois at Urbana-Champaign Office of Campus Emergency Planning recommend the following three responses to any emergency on campus: **RUN > HIDE > FIGHT**

For more information, http://police.illinois.edu/emergencyplanning/general/
More detailed recommendations for emergency response and TBH floor plans are posted on the Compass website of the course.

COURSE SCHEDULE

INTRODUCTION AND OVERVIEW

Week 1

Readings:	1/18	Introduction to UP316
Rea and Parker, Chapter 1: *An Overview of the Sample Survey Process*		
Lab:	NO Lab in the first week	

DEVELOPING AND ADMINISTERING SURVEY

Week 2

Readings:	1/23	Rea and Parker, Chapter 1: *An Overview of the Sample Survey Process*
(Project 1 hand out)	1/25	Rea and Parker, Chapter 3: *Developing Survey Questions*
Lab:	1/27	**Must attend**! Survey project team building and group discussion on individually developed survey questions
Assignment:	1/26,27	Five survey questions due (Post a pdf file to Compass on 26th AND bring ahard copy to the lab)

Week 3

Readings:	1/30	Rea and Parker, Chapter 2: *Designing Effective Questionnaires: Basic Guidelines*
	2/1	Administering efficient surveys (Rea and Parker, Chapters 1 - 3)
Lab:	2/3	Introduction to SPSS: Data Import & Export; Group work on survey design

ANALYSING SURVEY RESULTS

Week 4

Readings:	2/6	Rea and Parker, Chapter 5: *Descriptive Statistics: Measures of Central tendency and Dispersion* and Chapter 6: *The Theoretical Basis of Sampling*
	2/8	Rea and Parker, Chapter 7: *Confidence Intervals and Basic Hypothesis Testing*
Assignment:	2/8	Group survey *draft* due
Lab:	2/10	Using SPSS: Descriptive statistics, confidence intervals

Week 5

Readings:	2/13	Rea and Parker, Chapter 10: *Analyzing Cross-Tabulated Data*
	2/15	Chapter 11: *Testing the Difference Between Means*
Lab:	2/17	Data Analysis in SPSS: Cross-Tab, t-test, and ANOVA
Assignment:	2/17	Finalized survey &pre-test report due

Week 6

Readings:	2/20	Rea and Parker, Chapter 12: *Regression and Correlation*
	2/22	Rea and Parker, Chapter 12: *Regression and Correlation, Continued*
Lab:	2/24	Data Entry (Coding) and Analysis of Survey Results with SPSS
Assignment:	2/24	Bring completed surveys to the lab session for data coding

SURVEY SAMPLING

Week 7

Readings:	2/27	Rea and Parker, Chapter 8: *Determining Sample Size*
	3/1	Rea and Parker, Chapter 9: *Selecting a Representative Sample*
Lab:	3/3	Regression analysis and Analysis of Survey Results
Assignment:	3/3	Complete data set due

MID-TERM EXAM

Week 8	3/6	**EXAM**

CENSUS GEOGRAPHY AND CENSUS DATA

Readings:	3/8	OMB (2000) Standards for defining metropolitan and micropolitan statistical areas: Notice. *Federal Register* 65 (249) http://www.bls.gov/lau/frn249.pdfU.S. Census. 2013. 2010 Census Data Product Descriptions. Washington, DC: U.S. Census Bureau. Available at http://www.census.gov/2010census/news/pdf/data_products_2010_census2.pdf;
Lab	3/10	Downloading Census Data; Analysis of Survey Results (Group Work)

DEMOGRAPHIC ANALYSIS AND POPULATION PROJECTION

Week 9

Readings:	3/13	Wang and vomHofe, Chapter 3 Demographic Analysis (pp. 53-80); Hoch, Dalton, and So, 2000, *The Practice of Local Government Planning*, Chapter 4 Population Analysis.
	3/15	Wang and vomHofe, Chapter 3 Demographic Analysis (pp. 65-109).And Chapter 3 Demographic Analysis, Trend Extrapolation Methods (pp. 81-109).
Lab	3/17	Population Pyramid
Assignment:	3/17	Project 1: Group Survey Research Final Report Due

Week 10 SPRING BREAK

Week 11

Readings:	3/27	Wang and vomHofe, Chapter 3 Demographic Analysis, Trend Extrapolation Methods (pp. 81-109).
	3/29	Wang and vomHofe, Chapter 3 Demographic Analysis, Cohort-Component Method (pp. 110-127).
Lab:	3/31	Trend Extrapolation Exercise

Week 12

Readings:	4/3	Wang and vomHofe, Chapter 3 Demographic Analysis, Cohort-Component Method (pp. 110-127), *Continued*.

REGIONAL ECONOMIC ANALYSIS

	4/5	Wang and vomHofe, Chapter 4 Understanding Your Regional Economy (pp. 134-164).
Lab:	4/7	Cohort Component Method Exercise
Week 13		
Readings: 4/10		Wang and vomHofe, Chapter 4 Understanding Your Regional Economy (pp. 134-164 and pp. 196-201)
	4/12	Wang and vomHofe, Chapter 4 Understanding Your Regional Economy (pp. 165-194)
Lab:	4/14	Economic Base Analysis Exercise
Assignment:	4/14	Assignment 1 due: Population Analysis and Projection
Week 14		
Readings: 4/17		Wang and vomHofe, Chapter 4 Understanding Your Regional Economy (pp. 202-212)
	4/19	Richard Klosterman, Chapter 12 Constant-Share and Shift-Share Approaches
Lab:	4/21	Shift-Share Analysis Exercise

PROJECT EVALUATION: COST BENEFIT ANALYSIS

Week 15		
Readings:	4/24	Gupta, Dipak K. 2001. Chapter 14: Choosing the Best Alternative: Cost-Benefit Analysis from *Analyzing Public Policy: Concepts, Tools and Techniques.*
	4/26	*Cost-Benefit analysis*, Continued.
Lab:	4/28	Cost Benefit Analysis Exercise
Assignment:	4/28	Assignment 2 due: Regional Economic Analysis
Week 16		
Readings:	5/1	*Cost-Benefit analysis*, Continued.
	5/3	Gupta, Dipak K. 2001. Chapter 13: The Elements of Strategic Thinking: Decision Tree and Game Theory from *Analyzing Public Policy: Concepts, Tools and Techniques.*
Assignment:	5/8	Assignment 3 due: Cost Benefit Analysis due by **Noon**.