

# Demographics for Planning & Policy

**Seminar Meets:** Tues & Thurs 9:30am-10:50pm, SSL 152  
**Instructor:** SE I Rm 218F, 949 824 5797, tim.bruckner@uci.edu  
**Office Hours:** Thurs 3:30-5pm and by appointment  
**EEE:** Readings, Grades, and Schedule Available on EEE.

## Brief Description:

This seminar provides practical tools for planners to project the population size of local areas (e.g., counties, census tracts). We will consider primarily the technical and communication aspects of population forecasting, although demographic theory will also be discussed.

## Summary:

Any regional plan or policy should begin with a description of the affected population and an assessment of the population's likely changes over the life of the plan or policy. The need for such demographics is acute in local practice, yet policymakers often lack defensible estimates and forecasts of population at the local level (e.g., counties or smaller). Thus, local planners and practitioners often assume the task of constructing, adapting and interpreting population estimates and forecasts.

This seminar will introduce students to basic demographic measures and the main sources of population data. Students will then retrieve population data from electronic files and, using various methods, forecast population size for the census tract of their choice. Student presentations of results and completion of problem sets will comprise a core component of the work expectation. Through lectures, discussions, and presentations, we will devote much effort to critiquing and refining strategies for effective oral and written communication.

Because the methods used to project population are also used to project other trends, including housing, jobs, crime, school enrollments, health care demand, and environmental quality, this seminar will interest students from a variety of disciplines.

## Seminar Objectives:

By the end of the quarter, I expect students to have the following knowledge and skills:

- **Locate and select** elementary population, housing, and socioeconomic statistics of a census tract.
- **Understand and apply** several key demographic measures (e.g., total fertility rate, life expectancy, net migration) to forecast local-area population size.
- **Construct and Analyze** local-area population projections using demographic, extrapolation, and structural methods.
- **Interpret and clearly communicate** quantitative information.
- **Identify** the relative strengths and limitations of your forecasts.
- **Provide** examples of the relevance of demography to current planning issues.

### Prerequisites:

- (1) Completion of an undergraduate statistics course or equivalent.
- (2) Microsoft *Excel* literacy.
- (3) Exposure to *SPSS* or an equivalent social statistics program.
- (4) Hardware and software notes: the default setup for class presentation is Windows-based PowerPoint 2003 with input via flash drive. Any incompatibilities arising from alternative hardware or software (e.g., Apple) are entirely the user's responsibility.

### Work Requirement

Work will center on constructing alternative population projections for a set of census tracts ("neighborhoods") that you will select and follow throughout the quarter. You will have five problem sets (and corresponding in-class presentations). The last problem set will synthesize and annotate parts of the previous four. Submit all problem sets both in print and electronic form.

### Grading

Grading will be based on problem sets (75%) and seminar participation (25%) including regular attendance, discussion and presentation of work in progress, and completion of the course's three EEE evaluations.

Approximate grading weights appear as follows:

Problem Set 1	15%
Problem Set 2	15%
Problem Set 3	15%
Problem Set 4	15%
Problem Set 5	15%
Class Participation	20%
Completion of surveys/evaluations*	<u>5%</u>
<b>TOTAL</b>	<b>100%</b>

\* Students receive 1% for First Week Survey, 2% for Midterm Evaluation, 2% for Final Evaluation.

### **Required Texts:**

1. Smith, Stanley, Jeff Tayman and David Swanson. 2001. *State and Local Population Projections: Methodology and Analysis*. New York: Kluwer Academic.
2. Selected mass media excerpts will be available in the course's EEE drop box.

### **Highly Recommended:**

3. Miller, Jane E. 2004. *The Chicago Guide to Writing About Numbers*. Chicago: University of Chicago Press.

### **Also Recommended:**

4. Best, Joel. 2001. *Damned Lies and Statistics: Untangling Numbers from the Media, Politicians, and Activists*. Berkeley: University of California Press.
5. Myers, Dowell. 1992. *Analysis with Local Census Data: Portraits of Change*. San Diego: Academic Press.
6. Tufte, Edward R. 1983. *The Visual Display of Quantitative Information*. Cheshire, CT: Graphics Press.

### **Professional Conduct**

Our conduct should exemplify the UCI Principles of Community, which are based on civility and mutual respect. In addition, I endorse, and vigorously enforce University policies regarding academic integrity. Please take a moment to review these important principles, set forth in the *UCI General Catalogue*. Finally, our conduct should reflect the principles of personal responsibility and promotion of the public good, as embodied in the best practices of the urban and regional planning profession <http://www.planning.org/ethics/ethicscode.htm>.

### **Communication**

I welcome questions or discussions about course content and other issues. Please visit my office hours or schedule an in-person meeting for an appointment. I check email sparingly; I will try to respond to emails within 24 hours of receipt. When emailing, please use a UCI email address; otherwise, your message may route directly to my spam folder. For a faster response, please call my office telephone: (949) 824 5797.

\*\*\*Cell phones are **NOT** permitted in the classroom unless you are certain they are in the OFF or VIBRATE position.\*\*\*\*

WEEK	TOPIC	Date	Required Reading and Assignments (readings subject to change: consult EEE)
1	<b>Introduction</b>  <b>The principles of forecasting</b>	1/8	1. <b>Complete EEE First Day Survey by 5pm on 1/9 (1% of grade)</b>
		1/10	1. STS, Chapter 1 2. Menand, Louis. Everybody's an expert." <i>The New Yorker</i> , Dec 5, 2005, pp. 98-101. 3. Suggested: Miller, Ch 1 (Why write about numbers)
2	<b>Demographic measures and data sources</b>	1/15	1. STS, Chapter 2 (Fundamentals of population analysis)
		1/17	2. STS, Chapter 3 (Overview of the cohort-component method) 3. Suggested: Miller, Ch.2 (Seven basic principles)
3	<b>Small-area demographic characteristics</b>	1/22	1. STS, Chapter 4 (Mortality)
		1/24	1. <b>Problem Set #1 Due</b> (Designated students to present in class; all students to submit electronically via EEE.) 2. STS, Chapter 5 (Fertility)
4	<b>Cohort-component method of projection</b>	1/29	1. STS, Chapter 6 (Migration)
		1/31	1. STS, Chapter 7 (Implementing the cohort-component method) 2. Suggested: Miller, Ch.3 (Causality, statistical significance, and substantive significance)
5	<b>Conveying quantitative information effectively</b>	2/5	1. STS, Chapter 8 (Trend extrapolation models)
		2/7	1. <b>Problem Set #2 Due</b> (Designated students to present in class; all students to submit electronically via EEE.) 2. Suggested: Miller, Ch.5 (Types of quantitative comparisons)

6	<b>Simple and complex trend extrapolation forecasts</b>	2/12	<b>Complete EEE Mid-Quarter Survey by 5pm on Friday 2/15 (2% of grade)</b> 1. STS, Chapter 9 (Structural models I-economic demographic)
		2/14	1. <b>Problem Set #3 Due</b> (Designated students to present in class; all students to submit electronically via EEE.)
7	<b>Examining causes of population change</b>	2/19	1. STS, Chapter 11 (Special adjustments) 2. Suggested: Miller, Chs.6-7 (Creating effective tables and charts)
		2/21	NO CLASS 1. Myers D. California Futures: New narratives for a changing society. 2. Pitkin and Myers. Generational Projections of the California Population By Nativity and Year of Immigrant Arrival (focus on Executive Summary and CH 8 [methodology])
8	<b>Population projections: accuracy, bias, and social context</b>	2/26	1. STS, Chapter 12 (Evaluating projections)
		2/28	1. <b>Problem Set # 4 due</b> 2. STS, Chapter 13 (Forecast accuracy and bias)
9	<b>Practical guide to interpreting and presenting projections</b>	3/5	1. STS, Chapter 14 (A practical guide to small area projection)
		3/7	1. Suggested: Miller, Ch.12 (Speaking about numbers) concerns effective PowerPoint delivery.
10		3/12	1. <b>Student presentations of Problem Set # 5</b>
		3/14	1. <b>Student presentations of Problem Set # 5</b> <b>Complete EEE Final Survey by 5pm on Friday 3/15 (2% of grade)</b>
		3/19	<b>Due 11:59 PM, Tues March 19th: Problem Set 5, final document</b>