

This course emphasizes basic quantitative techniques in urban planning. It is a required course for the Master of Urban Planning degree

Three broad topics are covered. The first part of the course is devoted to a discussion of demography with an emphasis on population estimation and projection techniques. The second topic is cost benefit analysis. The technical details involved in the procedures for evaluating public projects are discussed. Finally, fundamental concepts of urban economic analysis, namely economic base studies and the shift-share approach are covered.

There is no required text for the course. Many of the readings are on-line. Those that are not available on-line will be distributed in class. There is a fee for these readings.

Students will be evaluated on the basis of two or three assignments (approximately 10% each), and a mid-term and final exam (approximately 40% each).

Following is a *tentative* calendar for class meetings:

Jan. 27 Basic demographic concepts; rates; population estimation and projection; the vital rates method.

Feb. 3 The dwelling unit method; ratio techniques.

Feb. 10 ***No class; classes meet according to a Thursday schedule.***

Feb. 17 Review of correlation and regression; the ratio correlation method.

Feb. 24 Trend extrapolation; life tables; introduction to the cohort component method.

Mar. 3 Details of the cohort component method; overview of the U.S. Census.

Mar. 10 Projecting school enrollments.

Mar. 17 Mid-term exam.

Mar. 24 Introduction to cost-benefit analysis; the time value of money.

Mar. 31 Interest and discounting; net present value.

Apr. 7 Net present value vs. benefit-cost ratio; marginal analysis.

Apr. 14 *No class; spring break.*

Apr. 21 Internal rate of return; equity considerations.

Apr. 28 Economic base analysis.

May 5 Economic base analysis (cont.); Shift-share analysis.

May 12 Shift-share analysis (cont.).

May 19 Final exam

Readings on population estimation and projection:

For Feb. 17:

Michael R. Greenberg, et al. "An Overview of Population Projection Methods" Chapter 1 in Local Population and Employment Projection Techniques (New Brunswick, NJ: Center for Urban Policy Research, 1978) pp. 5-21.

Norfleet W. Rives, Jr. and William J. Serow. Introduction to Applied Demography: Data Sources and Estimation Techniques (Beverly Hills, CA: Sage Publications, 1984).

*(Note that in this reading the discussion of the vital rates method occurs **after** the discussion of the housing unit method. The vital rates method starts on the bottom of page 55. The housing unit method starts on the top of page 44.)*

Stanley K. Smith and Scott Cody. "Evaluating the Housing Unit Method: A Case Study of 1990 Population Estimates in Florida" Journal of the American Planning Association. Spring 1994, Vol. 60, no. 2, pp. 209-221.

For Feb. 24:

United Nations, Department of Economic and Social Affairs. "World Population to 2300"
<http://www.un.org/esa/population/publications/longrange2/WorldPop2300final.pdf>

Read from the beginning up to and including page 21, and pages 82-84.

"Population Pyramids" (Syracuse, NY: American Demographics, 1983).

For Mar. 3:

Andrew M. Isserman. "The Right People, the Right Rates: Making Population Estimates and Forecasts with an Interregional Cohort-Component Model" Journal of the American Planning Association Winter 1993, Vol. 59, no. 1, pp. 45-64.

New York City Department of City Planning. "New York City Population Projections: 2000-2030"
<http://www.nyc.gov/html/dcp/html/census/popproj.shtml>

When you get to this page click on "Full Report" and carefully read the entire report. Also from this page, click on "Mayor Bloomberg's Sustainability Address" and read the entire address.

US Census Bureau. "An Older and More Diverse Nation by Midcentury"
<http://www.census.gov/Press-Release/www/releases/archives/population/012496.html>

US Census Bureau. "National Population Projections"
<http://www.census.gov/population/www/projections/summarytables.html>
Look especially at Tables 1, 3, 6 and 7.

US Census Bureau. "US Population Projections: Methodology"
<http://www.census.gov/population/www/projections/methodstatement.html>

For Mar. 10:

Andrew M. Isserman. "Projection, Forecast, and Plan: On the Future of Population Forecasting"
[Journal of the American Planning Association](#) Spring 1984, Vol. 50, no. 2, pp. 208-221.

Readings on Benefit-Cost Analysis:

For April 21.

Paul R. Portney. "Benefit-Cost Analysis" from [The Concise Encyclopedia of Economics](#)
<http://www.econlib.org/LIBRARY/Enc/BenefitCostAnalysis.html>

"Benefit-Cost Analysis" Chapter 8 from Steven E. Rhoads, [The Economist's View of the World](#).

Mark Sagoff. "The Limits of Cost-Benefit Analysis".

Herman B. Leonard and Richard J. Zeckhauser. "Cost-Benefit Analysis Defended".

Josephine M. LaPlante and Taylor R. Durham. "An Introduction to Benefit-Cost Analysis for Evaluating Public Expenditures".

Peggy Reichert. "Benefit-Cost Analysis for Transportation Projects" Minnesota Department of Transportation, Office of Investment Management.
<http://www.oim.dot.state.mn.us/EASS>
Read Sections 1-4; skim the rest.

Readings on Economic Base Analysis and Shift-Share Analysis:

For April 28:

Florida State University. "Economic Base Theory"

<http://mailer.fsu.edu/~tchapin/garnet-tchapin/urp5261/topics/econbase.htm>

In this reading, there is a link to the "Location Quotient Technique". After reading about Economic Base Theory, also read the Location Quotient section.

Note that this reading is a bit dated. There is a reference to Standard Industrial Classification (SIC) Codes. This system for classifying employment has been replaced by the North American Classification System (NAICS). For a brief description of NAICS go to:

<http://www.census.gov/eos/www/naics/index.html>

Read the main page, and the answers to questions 1 and 5 in the FAQs.

US Census Bureau. "County Business Patterns"

<http://www.census.gov/epcd/cbp/index.html>

Read the paragraphs describing County Business Patterns, and click on the link to "Overview" and read it.

For May 5:

Penn State University. "Shift-Share Analysis Helps Identify Local Growth Engines"

<http://cecd.aers.psu.edu/pubs/Tool%204.pdf>

Georgia Tech Economic Development Institute. "Shift-Share Analysis"

www.cherry.gatech.edu/6602/PRESENT/Shift-Share%20Analysis.ppt

You are not required to go through this PowerPoint presentation. It does, however, present a step-by-step approach to performing a shift-share analysis.

Quintero, James Paul. "Regional Economic Development: An Economic Base Study and Shift-Share Analysis of Hays County, Texas"

<http://ecommons.txstate.edu/cgi/viewcontent.cgi?article=1261&context=arp>

This reading is highly recommended. It provides a good description of economic base analysis and shift-share analysis, and performs the analyses using recent data.

N.B.: The readings are subject to change as new information often becomes available on the topics covered in the course.