

970:556
Urban Transportation Planning
Spring 2006
Professor Brail, CSQ 353
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Thursday 1:10-3:50pm

COURSE DESCRIPTION

This course in urban transportation planning will focus on concepts, methods and applications, and is designed to complement other transportation offerings in the department. The course assumes basic computer skills and a general background in statistics equivalent to the materials covered in the first term of Methods of Planning Analysis (970:515). The following topics will be covered:

- Decision-making in urban transportation
- The urban transportation planning process (UTPP)
- Urban development simulation models
- Introduction to transit planning
- Current planning initiatives

The course requirements will consist of a series of assignments and a final exam. The assignments will include the use of a computerized transportation planning package and a number of spreadsheet programs, including traffic impact analysis and transit planning. The main text is by Michael Meyer and Eric Miller, the definitive work in the area. This superb book has no competition and is quite expensive, but is the only real choice. The book is available at the Rutgers University Bookstore.

Michael D. Meyer and Eric J. Miller, *Urban Transportation Planning*, New York: McGraw-Hill, 2001

Also, there are many useful documents out on the web, and a number of important sites. I have put a number of these documents in the UP566 folder on the Common drive (S:).

Some useful web sites are:

- United States Department of Transportation (DOT) site
<http://www.dot.gov/>
- The BTS (Bureau of Transportation Statistics) is extremely important. You can also request BTS to send you a wide variety of transportation-focused publications.
<http://www.bts.gov/>
- The FTA (Federal Transit Administration) site contains useful transit data and documents
<http://www.fta.dot.gov/>
- ITS (Intelligent Transportation Systems) puts information technology in transportation
<http://www.nawgits.com/icdn.html>

COURSE OUTLINE AND READINGS

Date	Topic
Jan. 19	<p>Introduction to the course</p> <p>The current and emerging state of transportation planning</p> <ul style="list-style-type: none">▪ Michael D. Meyer and Eric J. Miller, <i>Urban Transportation Planning</i>, New York: McGraw-Hill, 2001, ch. 1 [Meyer and Miller]▪ Edward Weiner, <i>Urban Transportation Planning in the United States: An Historical Overview</i>, Revised Edition, November 1992 (particularly Preface and chaps. 1 and 12 http://www.bts.gov/ntl/DOCS/UTP.html
Jan. 26	<p>Overview of the urban transportation planning process</p> <ul style="list-style-type: none">▪ Meyer and Miller, ch. 2▪ E. Beimborn, <i>A Transportation Modeling Primer</i>, Center for Urban Transportation Studies, University of Wisconsin-Milwaukee, May 1995. http://www.uwm.edu/Dept/CUTS/primer.htm▪ E I Pas, “The Urban Transportation Planning Process,” <i>The Geography of Urban Transportation</i>. 2nd Edition. New York: Guilford Press, 1995
Feb. 2	<p>Travel and transportation system characteristics</p> <p>Data management and use</p> <ul style="list-style-type: none">▪ Meyer and Miller, ch. 3-4▪ Reports by the Bureau of Transportation Statistics<ul style="list-style-type: none">○ <i>National Transportation Statistics 2003</i> http://www.bts.gov/publications/national_transportation_statistics/2003/index.html○ <i>Highlights of the 2001 National Travel Survey</i> http://www.bts.gov/publications/national_household_travel_survey/highlights_of_the_2001_national_household_travel_survey/pdf/entire.pdf
Feb. 9	<p>Traffic access and impact analysis</p> <ul style="list-style-type: none">▪ Institute of Transportation Engineers, <i>Traffic Access and Impact Studies for Site Development</i>▪ F Greenberg and J Hecimovich, <i>Traffic Impact Analysis</i>. PAS No. 387. Chicago: American Planning Association, 1984
Feb. 16	<p>Urban transportation demand analysis 1</p> <ul style="list-style-type: none">▪ Meyer and Miller, ch. 5

- Feb 23 Urban transportation demand analysis 2
- Federal Transit Administration, *A Self-Instructing Course in Disaggregate Mode Choice Modeling*, DOT-T-93-18
<http://ntl.bts.gov/DOCS/381SIC.html>
 - USDOT, *Calibrating and Adjustment of System Planning Models* - December 1990 <http://ntl.bts.gov/DOCS/377CAS.html>
- Mar. 2 Using the QRS transportation planning package
- AJH Associates, *Quick Response System II (QRS); General Network Editor (GNE)*, selected pages.
 - A QRS II/GNE PRIMER - Part 1: An Introduction to the Use of Microcomputers for Travel Demand Analysis Using the GNE and QRS II Software, E Beimborn and A Horowitz, Center for Urban Transportation Studies, University of Wisconsin--Milwaukee, October 1998
<http://www.uwm.edu/Dept/CUTS//primer/qrs-gne1a.htm>
- Mar. 9 ITS, TRANSIMS and the Travel Model Improvement Program (TMIP)
- “TRANSIMS Overview IBM”
 - “About TMIP”
<http://tmip.fhwa.dot.gov/about/>
 - “Induced Travel: Frequently Asked Questions”
<http://www.fhwa.dot.gov/planning/itfaq.htm>
 - ITS – mitigating traffic demand
http://www.ops.fhwa.dot.gov/publications/mitig_traf_cong/index.htm
 - ITS 2005 program
<http://www.its.dot.gov/initiatives/exploratory.htm>
- Mar. 16 Spring break
- Mar. 23 Urban activity systems and urban development models
- Meyer and Miller, ch. 6
 - S Putman, “The METROPILUS Planning Support System: Urban Models and GIS,” *Planning Support Systems*, ed. R. Brail and R. Klosterman (ESRI Press, 2001)
 - P Waddell, “Between Politics and Planning: UrbanSim As A Decision Support System For Metropolitan Planning,” *Planning Support Systems*
 - T de la Barra, “Integrated Land Use and Transport Model: The Transus Experience,” *Planning Support Systems*

- March 30 Transportation supply: modes, alternatives, and performance measures
- Meyer and Miller, ch. 7
 - The "picture" show
 - Review the *Characteristics of Urban Transportation Systems*,
Revised Version, September 1992
<http://www.fta.dot.gov/fta/library/reference/CUTS/index.html>
- Apr. 6 Evaluation and implementation
- Meyer and Miller, chs. 8 and 9
- Apr. 13 Transportation planning in New Jersey
- Apr. 20 Transit planning and policy
Paul Larousse, Director, National Transit Institute
- April 27 Summary and review
- May 4 Final exam