

The content of the course is best described by the course outline below.

Your obligations are to attend class regularly, do the assigned readings and participate in class discussions. There will be one assignment based on the material described in weeks 8 – 9 below (20%), a paper and presentation based on the material described in weeks 2 – 7 below (30%), and a final exam (50%).

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

Course Outline

Week 1: Introduction

Weeks 2 - 7: Traffic congestion; transportation systems management; transportation demand management. A discussion of the dimensions of the congestion problem; causes of the problem; measuring congestion; tools for mitigating congestion.

Suggestions for paper topics will be distributed at the beginning of this section. Papers are due by Week 12 (Apr. 30). Students will briefly summarize their papers in class.

Weeks 8 - 9: Alternatives analysis; the costs and benefits of transportation improvements.

An assignment on cost-benefit analysis will be distributed at the beginning of this section. The assignment must be completed by Week 11 (Apr. 23) so that we can discuss the results in class.

Weeks 10 - 12: Historical development of transportation systems; history of transportation institutions, with an emphasis on the financing of transportation improvements.

Weeks 13 - 14: Miscellaneous topics. Some possibilities: transportation and energy; traffic safety; traffic calming. Please suggest other topics.

Student presentations will also take place during these weeks.

Week 15: Final exam

Class meetings: Jan. 29
Feb. 5, 10 (*Tues.*), 19, 26
Mar. 5, 12, 19, 26
Apr. 2, 23, 30
May 7, 14

Final exam: May 21

Introduction:

John Seabrook. "The Slow Lane" The New Yorker Sept. 2, 2002.

Kai Nagel. "Hell on Wheels" The Sciences May/June 1999.

"Today's China, in a Rush, Has No Time for Bikes" The New York Times Sept. 6, 2002.

"Go Ahead, Drive Into London. That Will Be 5 Pounds, Please" The New York Times Sept. 6, 2002.

"In Atlanta, More Births on the Road" The New York Times Aug. 14, 2000.

"As Suburbs Grow, So Do Waistlines" The New York Times Sept. 4, 2003

"One Vehicle on the Road, Two Others in the Garage" The New York Times Aug. 30, 2003

"The Long and Winding Road, to Work" The New York Times March 31, 2005

"A City's Traffic Plans are Snarled" The New York Times July 12, 2005

Readings on transportation history:

George M. Smerk. "Public Transportation and the City" in George E. Gray and Lester A. Hoel, eds. Public Transportation, 2nd ed. (Englewood Cliffs, NJ: Prentice-Hall, 1992). pp. 3-23.

Arthur Saltzman. "Public Transportation in the 20th Century" in Gray and Hoel. pp. 24-45.

Edward Weiner. "Urban Transportation Planning in the United States: An Historical Overview" <http://tmip.fhwa.dot.gov/clearinghouse/docs/utp> (**just skim this**)

Martin Wachs and Jennifer Dill. "Regionalism in Transportation and Air Quality: History, Interpretation, and Insights for Regional Governance", pp. 296-310, 319-322 in Alan Altshuler, et al., eds. Governance and Opportunity in Metropolitan America (Washington, DC: National Academy Press, 1999).

Readings on evaluation of transportation improvements:

Michael D. Meyer and Eric J. Miller. Urban Transport Planning: A Decision-Oriented Approach. (NY: McGraw-Hill, 1984). pp. 372-406.

Michael D. Meyer. "Financial and Economic Considerations" in John D. Edwards, Jr. Transportation Planning Handbook. (Englewood Cliffs, NJ: Prentice-Hall, 1992). pp. 482-488, 494-500.

Paul H. Wright and Norman J. Ashford. Transportation Engineering: Planning and Design, 3rd ed. (NY: Wiley, 1989). pp. 346-358.

Peggy Reichert. "Benefit-Cost Analysis for Transportation Projects" Minnesota Department of Transportation, Office of Investment Management.
<http://www.oim.dot.state.mn.us/EASS>

Readings on traffic congestion, TSM, and TDM:

Dennis Judycki and Wayne Berman. "Transportation System Management" Chap. 9 in John D. Edwards, Jr. Transportation Planning Handbook (Englewood-Cliffs, NJ: Prentice-Hall, 1992).

Erik Ferguson. "Transportation Demand Management: Planning, Development, and Implementation" APA Journal Autumn 1990.

Wayne Berman. "Travel Demand Management: Thoughts on the New Role for TDM as a Management and Operations Strategy" ITE Journal September 2002.

Robert Edelstein and Milota Srkal. "Congestion Pricing" ITE Journal Feb. 1991.

Kenneth A. Small "The Value of Value Pricing" Access Spring 2001

ITE Task Force on High-Occupancy/Toll (HOT) Lanes. "High-Occupancy/Toll (HOT) Lanes and Value Pricing: A Preliminary Assessment" ITE Journal June 1998.

Gordon J. Fielding and Daniel B. Klein. "Hot Lanes: Introducing Congestion-Pricing One Lane at a Time" Access Fall 1997.

Mark W. Burris and Bill R. Stockton. "HOT Lanes in Houston—Six Years of Experience" Journal of Public Transportation Vol.7,No.3 2004.

Mark W. Burris, Chris R. Swenson and George L. Crawford. "Lee County's Variable Pricing Project" ITE Journal April 2002.

Srinivasa Sunkari. "The Benefits of Retiming Traffic Signals" ITE Journal April 2004.

Steven E. Shladover. "What If Cars Could Drive Themselves?" Access Spring 2000.

Gary W. Euler. "Intelligent Vehicle-Highway Systems" Chap. 15 in James L. Pline Traffic Engineering Handbook, 4th ed. (Englewood Cliffs, NJ: Prentice-Hall, 1992).

New Jersey Traffic Congestion and Air Pollution Control Act 1992.

Robert Cervero. "Congestion Relief: The Land Use Alternative" Journal of Planning Education and Research Vol.10, No.2.

Eva Lerner-Lam, et al. "Neo-Traditional Neighborhood Design and Its Implications for Traffic Engineering" ITE Journal Jan. 1992.

David S. Shelton and Anthony K. Lo. "Transit-Oriented Development in the Seattle, WA, USA Area" ITE Journal August 2003.