

Urban Planning 771
Transportation Policy and Planning
Department of Urban Planning
University of Wisconsin - Milwaukee
Spring 2007

Instructor:

Dr. Zhong-Ren Peng, Professor. (Room 340, 229-5887, zpeng@uwm.edu)

Schedule:

Class: Monday 1:30 – 4:10 pm

Classroom: AUP 183

Office Hours: Tuesday 3:00—4:00, Thursday 3:00 – 4:00, or by appointment

Course Overview

This course focuses on planning for passenger transportation of metropolitan areas. It will help develop an understanding of the federally-mandated transportation planning process, transportation policy and methods of transportation planning. We will consider the role of planning in both advising politicians and policy-makers and also in advocating on behalf of communities affected by transportation projects. The course reviews the history of urban transportation, transportation finance, and environmental and planning requirements. The course also covers land use and transportation interaction, traffic impact analysis, and the impacts of new technology on transportation systems. The following questions are to be addressed:

- Why transportation is important in urban development and quality of life?
- How do federal policies affect the transportation system we have today?
- Why do we have congestion and how do we get out of it?
- How is the transportation system financed, and what is the problem associated with transportation finance?
- What is the relationship between transportation, land use and urban growth patterns?
- What is the transportation planning process and methods? How does a transportation planner do transportation planning?
- What is the difference between accessibility and mobility, and how to increase accessibility?
- Why is there multi-modal system in transportation, and what roles does each mode of travel (e.g., public transit, private vehicles, and non-motorized modes) play in the transportation system?
- What is the Intelligent Transportation System, and how does it facilitate transportation operation and management?

There will be an overview of the major models used in transportation planning. Students will have the opportunity to use these models in a transportation modeling software package. We will also have occasional guest speakers who are involved in transportation planning and projects in Wisconsin.

Prerequisites: No prior experience in transportation issues is required. At least one class in introductory economics and geographic information systems (GIS) is recommended.

Assignments: There will be 2 short written assignments (6 to 8 pages double space), one analytical assignment (using transportation planning software), one GIS assignment (using GIS software), a final exam, and a project. Grading will be based on the following components: 20% assignments, 35% exam, 35% final project, and 10% class participation (discussions).

Textbook and Readings:

- Required textbook: Susan Hanson and Genevieve Giuliano (Eds.), *The Geography of Urban Transportation*, Third Edition, New York: Guilford Publications, 2004.
- Meyer, Michael D. and Eric J. Miller. *Urban Transportation Planning: A Decision-Oriented Approach*, Second edition. New York: McGraw Hill. 2001.
- Anthony Downs. *Stuck in Traffic*. Washington, DC: Brookings, 1992.
- Anthony Downs. *Still Stuck in Traffic*. Washington, DC: Brookings Institution Press, July 2004
- Reading materials: available through Electronic Reserve at the UWM Library Web page (<http://www.uwm.edu/Library/ERES/peng/URBPLAN771p.html>).

I. HISTORY

1. Jan. 22 Instructor at the Transportation Research Board meeting, no class
2. Jan. 29 **Course Overview; Transportation Trends and Analytical Perspectives**

Susan Hanson, The context of Urban Travel: Concept and Recent Trends, Chapter 1. In *The Geography of Urban Transportation*. Third Edition. The Guilford Press.

Pisarski, Alan, 2006, Commuting in America III,
http://www.trb.org/news/blurb_detail.asp?ID=6699

Downs, Anthony, 1992. Stuck in Traffic. Washington: Brookings. Chapter 1. pp. 7-22.

Downs, Anthony, 2004. Still Stuck in Traffic. Washington: Brookings. Chapters 1-5. pp. 1-75.

<http://mobility.tamu.edu/ums/>

3. Feb. 5 **History of the Public Transit Industry**

Jones, David, 1985. *Urban Transit Policy: An Economic and Political History*. Englewood Cliffs, NJ: Prentice Hall. pp. 1-27; 62-64; 86-89; 96-108.

Kwitny, Jonathan, 1981. The Great Transportation Conspiracy: How GM and its Allies Dismantled America's Mass Transit. *Harper's*, 262:1569, February, pp. 14-21.

Weiner, Edward. 1992. *Urban Transportation Planning in the United States: An Historical Overview*, Revised Edition. pp. 240-257. U.S. DOT. (Summary of ISTEA.)

4. Feb. 12 **History of Highway Development**

Gifford, Jonathan, 1984. The Innovation of the Interstate Highway System, *Transportation Research*, 18A.4, July

Rose, Mark and Bruce Seely, 1990. Getting the Interstate System Built, *Journal of Policy History*, 2.1

Altshuler, Alan et al. *The Urban Transportation System*. Cambridge: MIT Press. Second edition, 1981. Ch. 2, Recent System and Policy Evolution. pp. 19-31; pp. 317-323.

TEA 21 <http://www.fhwa.dot.gov/tea21/sumcov.htm>

SAFETEA-LU: <http://www.fhwa.dot.gov/safetealu/index.htm>

II. Transportation Planning Process and Techniques

5. Feb. 19 Urban Transportation Planning Process

Assignment 1 due at the beginning of the class.

Chapters 5 and 6. In *The Geography of Urban Transportation*. Third Edition. The Guilford Press.

Edward Beimborn and Rob Kennedy, Inside the Black Box: Making Transportation Models Work for Livable Communities. Available at <http://www.uwm.edu/dept/CUTS/primer.htm>

6. Feb. 26 Urban Transportation Planning Techniques (Part 1)

Meyer, Michael D. and Eric J. Miller. *Urban Transportation Planning*, Second edition, Ch. 5., Demand Analysis. pp. 247-320.

7. Mar. 5 Urban Transportation Planning Techniques (Part 2)

QRS II Software Practice

8. Mar. 12 GIS Applications in Transportation Part 1: Linear data model

Assignment #2 due at the beginning of the class.

Timothy Nyerges, GIS in Urban-Regional Transportation Planning. Ch 7, In *The Geography of Urban Transportation*.

9. Mar. 19 Spring Recess

10. Mar. 26 GIS Applications in Transportation Part 2: Data structure and Dynamic Segmentation

Dueker, K. J. and Vrana, R. (1992). Dynamic Segmentation Revisited: A Milepoint Linear Data Model. *Journal of the Urban and Regional Information Systems Association*, 4(2): 94-105

11. April 2 **GIS Applications in Transportation Part 3: Network Analysis**

Readings to be assigned

III. Urban Transportation Policies

12. April 9 **Urban Transportation Finance: Transit and Highways**

Assignment #3 Due at the beginning of the class.

Wachs, Martin. US Transit Subsidy Policy: In Need of Reform. *Science*. Vol. 244. (30 June 1989). pp. 1545-1549.

Cervero, Robert, 1990. Transit Pricing Research: A Review and Synthesis, *Transportation*, 17.2

J. A. Gomez-Ibanez. 1992. The Political Economy of Highway Tolls and Congestion Pricing. *Transportation Quarterly*. 46:3. pp. 343-360.

Chapter 11, In *The Geography of Urban Transportation*. Third Edition. The Guilford Press.

13. April 16 **Transportation, Land Uses and Urban Forms**

Peter O. Muller, Transportation and Urban Form: Stages in the Spatial Evolution of the American Metropolis. Ch. 3, In *The Geography of Urban Transportation*. Third Edition.

Chapter 9, In *The Geography of Urban Transportation*. Third Edition. The Guilford Press.

Genevieve Giuliano. The Weakening Transportation-Land Use Connection. *Access*. No. 6, Spring 1995. pp. 3-11.

Cervero, Robert and John Landis. The Transportation-Land Use Connection Still Matters. *Access*. No. 7, Fall 1995. pp. 2-10.

Susan Handy. Highway Blues: Nothing a Little Accessibility Can't Cure. *Access*. Vol. 5. Fall 1994. pp. 3-7.

14. April 23 **Transportation, Energy and the Environment**

Chapters 10, 12, and 13, In *The Geography of Urban Transportation*. Third Edition. The Guilford Press.

IV. CURRENT TOPICS

15. April 30 **Transportation Demand Management**

Assignment #4 due at the beginning of the class.

Ch. 14, In *The Geography of Urban Transportation*. Third Edition. The Guilford Press.

Shoup, Donald. 1995. An Opportunity to Reduce Minimum Parking Requirements. *Journal of the American Planning Association*. Vol. 61, No. 1. pp. 14-28.

Shoup, Donald. 1997. The high Cost of Free Parking. *Journal of Planning Education and Research*. Vol. 17, No. 1. pp. 3-20

Willson, Richard W. 1995. Suburban Parking Requirements: A Tacit Policy for Automobile Use and Sprawl. *Journal of the American Planning Association*. Vol. 61, No. 1. pp. 29-42.

Genevieve Giuliano. 1992. Transportation Demand Management: Promise or Panacea? *Journal of the American Planning Association*, Vol. 58, No. 3, pp. 327-335.

16. May 7. **Introduction to Intelligent Transportation Systems**

Final project due

Chapter 4, In *The Geography of Urban Transportation*. Third Edition. The Guilford Press.

Other readings to be assigned in class

17. May 14 **Final Exam**