University of Louisville

School of Urban and Public Affairs

PLAN 624/UPA 690 - Urban Transportation Planning (and Policy)

Wednesday 5:30 pm, USI 200

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Office Hours: Tuesday and Wednesday 4:00 pm to 5:15 pm

Course Prerequisites:

Principles of Microeconomics and Introductory Statistics (with basic regression analysis).

Course Description:

This course emphasizes transportation policy (rather than transportation planning). After introducing the necessary economic tools, we analyze important transportation issues, such as parking and congestion, automobile ownership and public transportation, or infrastructure investment and transportation finance. Since transportation policies often lead to unintended consequences or even cause unpriced externalities, the focus of analysis will be on economic efficiency and welfare effects resulting from transportation planning decisions. The class will be taught seminar-style, which means students have to prepare presentations and there will be extensive time for discussions.

Learning Objective:

- To help future urban planners, public policy analysts and Ph.D. recipients in Urban and Public Affairs to understand the importance of urban transportation.
- To familiarize students with current transportation issues.
- To provide students with the economic tools to analyze transportation policies.
- To introduce students to travel demand modeling.
- To expose students to original research in the field of transportation.
- To prepare students for empirical research in transportation.

Teaching, Readings & Evaluations:

The meetings will be a mix of lecture at the board, hands-on exercise and, hopefully a lot of discussions. There may be also some work in the computer lab. While I do not require excuses for missed classes, I strongly recommend that you come to class regularly, and if you cannot attend, that you get the notes from a class mate. I am convinced that the nature of the presented material makes attendance self-enforcing. I will not accept under any circumstance the excuse that you have missed a certain class.

This course is heavy on readings and you will spend several hours a week just reading. I require you to read one to four articles (or one book) per week. Some of them are difficult to understand, but all of them are very insightful. It is very important for you to be an active reader and to keep up with the readings. Remember, there are only very few people in the class, and a class discussion needs participants. Also, if you start to fall behind, it will be very difficult for you to catch up again.

The class is seminar-style. This means that you will have to prepare several in-class presentations. After the first few weeks, I will start almost entirely to rely on you. Two students will present up to four articles or an entire book to the class (1 hour). We will have a discussion of half an hour, and the remaining hour I will introduce next week's topic.

Because of the above structure, every person needs to prepare a class meeting together with another person three times. In addition, two other people function as a discussant for each class meeting. This job falls on everyone three times as well. Everyone has to write one short paper, reviewing the literature of one class topic and proposing new research. You do not, however, have to do the actual research. But you should discuss the expected outcome of the research.

In addition, I will give you three homework assignments: A discussion of transportation statistics, an econometric estimation of a public transit cost function, and an interpretation of a mode choice model results. You will have to also prepare a final research paper, which may or may not build on the short paper.

Grading:

The final grade consists of the following:

1. 3 homework assignments each 10 points (30 points)
2. 2 presentations each 10 points (20 points)
3. 2 discussant jobs each 5 points (10 points)
4. Short paper (10 points)
5. Final research paper (25 points)
6. Participation (5 points)

My grading approach for essays is as follows: Good/average work will be graded at 8.5 (B+), very good work at 9.5 (A), inferior work at 7.5 (B-) and very bad work at 6.5 (C). In addition I may deduct 0.5 for sloppy work, or add 0.5 for very good presentation. Therefore, it will be possible to get 10 points for

perfect work. In the grading process, I will compare the work of all students in an attempt to groups them. I do not, however, curve. Especially perfect work will be held to an absolute standard.

All assignments are due before the class starts! I do not want you to miss a lecture just to finish an assignment. For late work I will deduct 1 point grade for the first week, after that I will not accept the work anymore. I have a relaxed grade scale which is:

A+: 96 – 100; A: 91 – 95; A-: 86 – 90;
B+: 81 – 85; B: 76 – 80; B-: 71 – 75;
C+: 66 – 70; C: 61 – 65, C-: 56 – 60,
D: 51 – 65; F ≤ 50.

Academic Integrity:

It is expected that a student in the Graduate School will refrain from plagiarism and cheating. Plagiarism and cheating are serious breaches of academic conduct and may result in permanent dismissal. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. Any proven plagiarism will result in failure of the course and will be reported to the committee on student discipline for further action, including notice in the permanent record, dismissal or expulsion.

Disability Statement:

All students with a disability who require special accommodations to participate in and complete this course must contact the Disability Resource Center (852-6938) for verification of eligibility and for determination of specific accommodation.

Textbook:

Gómez-Ibáñez, José A. (1999). *Essays in Transportation Economics and Policy. A Handbook in Honor of John R. Meyer.* Brooking Institution, Washington, D.C. [Essays] {required purchase}

Hanson, Susan (2004). *The Geography of Urban Transportation.* Third Edition. Guilford Press, New York, NY. [Geography] {library reserve}

McCarthy, Patrick S. (2001). *Transportation Economics. Theory and Practice: A Case Study Approach.* Blackwell Publishers, Malden, MA. [Economics] {library reserve}

Course Topics and Readings:

***required reading

**recommended reading

*additional reading

1. Introduction to transportation and statistical overview

***Economics Chapter 1

**Geography Chapter 1

2. Travel demand forecasting models

***Beimborn, Edward A. (1995). "A Transportation Modeling Primer." *Center for Urban Transportation Studies, University of Wisconsin, Milwaukee, WI.*

**Geography Chapter 5

3. Transportation demand

***Essays Chapter 2

**Economics Chapters 3 & 4

4. Transportation cost

***Essays Chapter 3

***Williams, Martin (1979). "Firm Size and Operating Costs in Urban Bus Transportation." *Journal of Industrial Economics 28 (2).*

**Economics Chapters 5 & 6

5. Welfare analysis: Environmental externalities and pricing in transportation

***Essays Chapter 4

***Delucchi, Mark (2000). "Should We Try to Get the Price Right? Access 16.

**Economics Chapters 7 & 8

**Geography Chapters 13

*Greene, David L. et al. (1997). *The Full Costs and Benefits of Transportation: Contributions to Theory, Method, and Measurement.* Springer Verlag, Berlin, Germany and New York, NY.

6. Congestion

***Essays Chapter 6

***Leape, Jonathan (2006). "The London congestion Charge." *The Journal of Economic Perspectives 20 (4).*

**Economics Chapters 11

* Downs, Anthony (2004). *Still Stuck in Traffic. Coping with Peak-hour Traffic Congestion.* Brooking Institution, Washington, D.C.

7. Induced demand

***Cevero, Robert (2001). "Induced Demand: An Urban and Metropolitan Perspective." W*orking Paper No. 648 , University of California Transportation Center, Berkeley, CA.*

**Cevero, Robert (2001). "Road Expansion, Urban Growth, and Induced Travel: A Path Analysis." W*orking Paper No. 520, University of California Transportation Center, Berkeley, CA.*

**Cevero, Robert (2000). "Road Supply-Demand Relationships: Sorting out Causal Linkages." W*orking Paper No. 444 , University of California Transportation Center, Berkeley, CA.*

8. Transportation and land use/urban form

***Essays Chapter 12

**Geography Chapters 3 & 9

**Economics Chapter 12

**Boarnet, Marlon (2001). *Travel by Design: The Influence of Urban Form on Travel.* Oxford University Press, Oxford, UK and New York, NY.

9. Automobile ownership and non-motorized modes

***Salon, Deobaoh (2006). "Cars and the City? A Model of the Determinates of Auto Ownership and Use for Commuting in New York City with Endogenous Choice of Residential Location." *TRB Paper Presentation, Washington, D.C.*

***Goetzke, Frank (2006). "Mode Choice and Social Networks: The Economics of Walking, Bicycling and Public Transit Use." *Dissertation essay, West Virginia University, Morgantown, WV.*

**Pucher, John (1997). "Bicycling boom in Germany: A Revival Engineered by Public Policy." *Transportation Quarterly 3.*

10. Parking

***Shoup, Don (1997). "The High Cost of Free Parking." *Journal of Planning Education and Research 17 (1).*

**Arnott, Richard (2005)."Some downtown Parking Arithmetic." In: Arnott, Richard, Tilmann Rave and Ronnie Schöb. *Alleviating Urban Traffic Congestion*. MIT Press, Cambridge, MA.

11. Public transit

***Essays Chapter 11

***Geography Chapter 8

**Baum-Snow, Nathaniel and Matthew E. Kahn (2005). "Effects on Urban Rail Transit Expansions: Evidence from Sixteen Cities 1970 – 2000." *Brookings-Wharton Papers on Urban Affairs.*

**Wachs, Martin (1989). "U.S. Transit Subsidy Policies." *Science 244.*

*Adler, Sy (1991). "The Transformation of the Pacific Electric Railway: Bradford Snell, Roger Rabbit, and the Politics of Transportation in Los Angeles." *Urban Affairs Quarterly 27 (1).*

* Kain, J. F. (1992) The Use of Straw Men in the Economic Evaluation of Rail Transport Projects, *American Economic Review*, 82 (2).

*Klein, Daniel B., Adrian Moore and Binyam Reja (1997). *Curb Rights: A Foundation for Free Enterprise in Urban Transit.* Brooking Institution, Washington, D.C.

*Pickrell, Don (1992). "A Desire Named Streetcar: Fantasy and Fact in Rail Transit Planning." *Journal of the American Planning Association 85 (2).*

12. Infrastructure investment & economic development

***Essays Chapter 5

**Economics Chapters 9 & 10

**Winston, Clifford (1991). "Efficient Transportation Infrastructure Policy." *The Journal of Economic Perspectives 5 (1).*

*Boarnet, Marlon (1997). "Infrastructure Services and the Productivity of Public Capital." *National Tax Journal 50 (1).*

*Gramlich, Edward M. (1994). "Infrastructure Investment: A Review Essay." *Journal of Economic Literature 32 (3).*

*Munnell, Alicia H. (1992). "Infrastructure Investment and Economic Growth." *Journal of Economic Perspectives 6 (4).*

13. Safety

***Sobel, Rusell S. and Todd M. Nesbit (forthcoming). "Automobile Safety Regulation and the Incentive to Drive Recklessly: Evidence from NASCAR." *Southern Economic Journal.*

**Economics Chapter 13

**Levitt, Steven M. and Jack Porter (2001a). "Sample Selection in the Effectiveness of Air Bag and Seat Belt Effectiveness." *Review of Economics and Statistics 83 (4).*

**Levitt, Steven M. and Jack Porter (2001b). "How Dangerous are Drinking Drivers?" *Journal of Political Economy 109 (6).*

*Levitt, Steven M. and Joseph J. Doyle, Jr. (2002). "Evaluating the Effectiveness of Child Safety Seat and Seat Belts in Protecting Children from Injury." *Working Paper.*

*Levitt, Steven M. (2005). "Evidence that Child Safety Seats are no more Effective than Seat Belts for Children Age Two and Older." *Working Paper.*

*Traynor, Thomas (2003). "The Impact of Safety Regulations on Externalities." *Atlantic Economic Journal 31 (1).*

14. Transportation finance and equity

***Essays Chapter 13

***Wachs, Martin (2003). Improving Efficiency and Equity in Transportation Finance." *Brooking Institution Center on Urban and Metropolitan Policy.*

**Geography Chapters 11 & 12

* Gómez-Ibáñez, José A. and John R. Meyer (1993). *Going Private: The International Experience with Transportation Privatization.* Brookings Institution, Washington D.C.

I reserve the right to change the syllabus when necessary.