Urban Transportation Planning (Fall 2011)

BASIC INFORMATION
Instructor: Jon Makler, AICP
Time: Wednesdays 1:00 - 3:40 p.m.
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COURSE REQUIREMENTS

Objectives
This is an intermediate course in transportation planning for graduate students. It is intended primarily for planning students interested in transportation but also transportation engineering students who are interested in planning. It is expected that the subject matter covered in USP 556 (Urban Transportation: Problems and Policy) is familiar, although the course is not a pre-requisite.

By the end of the quarter, students should have a clear understanding of how transportation plans, capital programs, and individual projects are developed; that is, students should understand how ideas come to be implemented. The course has a domestic orientation with an emphasis on the planning paradigm that was created by the Intermodal Surface Transportation Efficiency Act in 1991 and on the role of Metropolitan Planning Organizations in particular.

Pre-requisites: Students are expected to have completed a basic descriptive and inferential statistics course (such as USP 535) and an intermediate-level microeconomics course (such as USP 515). Students without this preparation should consider taking USP 544 at a later date, after first remedying any deficiencies, or taking a different course to fulfill their degree requirements.

Grading
Class Participation - 10%
   TPAC Role Play Exercise (Week 7) - 5%
   General Participation - 5%
Minor Assignments - 20% (4 @ 5% each)
   1. Phone Interview Journal (due week 3)
   2. National Transit Database Data Crunch (due week 5)
   3. Commuting in America Figure Discussion (due week 6)
   4. News Response (due any time before class on 11/23)
Memo #1: Planning Goals - 25%
Memo #2: TIP - 20%
Final: Op-Ed - 25%

Class Participation - 10%
Everyone is expected to attend class regularly and participate actively, e.g. ask questions, answer questions, raise topics for discussion, join in group work. Several exercises are identified in the syllabus, including the "TPAC Role Play" which counts for 5% of the overall grade. "Satisfactory" participation means that you attend class regularly, pay attention and ask questions. "Excellent" class participation means that you make an original contribution, such as sharing examples that relate to the topics covered in class and expand the discussion.

Minor Assignments - 20%
The purpose of these four assignments is to facilitate the development of certain skills that are reasonably expected of transportation planners. For assignments #3 and #4 - the discussion of figures from the Commuting in America report (due week 6) and your analysis of a transportation news story (due any time before week 9 (11/23), you will submit your product online in a Google Group. Active participation, posing questions or responding to posts by your classmates, can count the same as class participation (above) as long as it is done before the final is due.

"News Response" Assignment: Pick any mainstream news story or journal article (professional blogs may be used with caution; the annual transportation special issue of Planning magazine is highly recommended) about transportation planning and prepare a brief response. Make sure you address the following three topics: What, So What and Now What. "What?" refers to the topic (explain it in your own words); "So What?" refers to why the topic is significant or important; "Now What?" refers to the implication for actions or next steps, which could be policy, research, implementation or other. Required: relate the topic to something we've covered in class; consider how readers of the story/article may react; critique the author's use of
data/evidence/research. Update (9/28): You must cite at least one peer-reviewed paper and discuss how it relates to your chosen news story. Post your product to the Google Group by week 9’s class (11/23).

Technical Memos
You will prepare two technical memoranda during the quarter. These assignments are intended to reflect a task that a junior transportation planner would be expected to perform in the first few months on the job and you are encouraged to seek actual examples on which to model your work. In each memo, you will be evaluated on the basis of your ability to demonstrate mastery of the subject and your ability to appropriately communicate complex material to a specific audience.

- The first memo corresponds to the 3-week "Plans" module. Each student will be adopting a domestic transportation plan as the basis for a series of assignments and in-class exercises as well as this memo. Successful deliverables will synthesize the lessons learned throughout the module (topics include goal formulation, public involvement and exogenous planning forces such as climate change action plans).
- The second memo corresponds to the 3-week "Programs" module. The class will examine the capital programming process at Metro, the Metropolitan Planning Organization in Portland. For this memo and a role play exercise in week 7, each student will adopt a member of Metro’s Transportation Policy Alternatives Committee. Successful deliverables will demonstrate understanding of the topics covered in the module (such as transportation demand models and performance measures) and an awareness of political sensitivities.

Final "Exam"
The final "exam" for this course will consist of an op-ed piece suitable for publication in a major American newspaper. In this medium, the successful student will demonstrate mastery of transportation planning concepts, an ability to utilize data to support an argument as well as the ability to compose that argument in a clear and compelling manner that is appropriate to the audience. In this way, the "exam" will be comprehensive for the entire course. The detailed assignment will be distributed in the final class of the quarter (on November 30th).

A Note about Citations
Because the assignments for this course emphasize audience-specific formats such as technical memos and op-ed writings, it may be inappropriate to cite references in a standard academic fashion. However, it is still important for you to find and use references such as peer-reviewed journal articles. For information about proper citation methods, refer to http://www.lib.pdx.edu/instruction/survivalguide/writeandcitemain.htm, which offers the following guidance:

"The idea of research is to study what others have published and form your own opinions. When you quote people -- or even when you summarize or paraphrase information found in books, articles or Web pages -- you must acknowledge the original author.

If you use someone else's words or ideas without crediting them, you are committing a type of theft called plagiarism. Plagiarism can be as obvious as turning in another person's paper or project as your own, or as sly as simply paraphrasing sections of various works. It is also incorrect to copy text from Web pages or other sources without identifying where they came from."

COURSE WEB SITE
I intend to manage the course through the use of an online syllabus via Google Sites in conjunction with correspondence via a Google Group. (As an adjunct faculty, I have decided not to adopt the Desire2Learn platform.) I have created a page for each week’s class that includes the topics to be covered, readings and assignments. All readings for this course are provided via links from the online syllabus or, in a few cases, as attachments. Students are responsible for monitoring the site for announcements and other updates, especially related to assignments. I will try to post copies of lecture slides (or other visual aides, handouts, etc.) on the site within a day or two after class.

Google Group: For Minor Assignments #3 and #4, you will use the Google Group platform for submitting your work and participating in online discussions with your classmates. Email: usp-544-group@pdx.edu

GRADING POLICIES
The PSU Bulletin defines grades as follows (for graduate students):

A-Excellent
B-Satisfactory
C-Below graduate standard

Therefore, simply doing the required work does not warrant an A grade. Your work must be excellent to receive an A grade.

Incomplete Grades: I will only assign an incomplete (I) grade when circumstances are consistent with PSU’s policy on incomplete grades (see: http://pdx.edu/sites/www.pdx.edu.oaa/files/2011%20Bulletin.pdf at the bottom of page 45). "Circumstances must be unforeseen or beyond [your]
control." In other words, I do not give incompletes for poor planning on your part, e.g. you got too busy with work or your other classes. If you do encounter unforeseen circumstances, approach me as soon as possible about entering into a written agreement for an incomplete grade.

**Late Assignments:** One-third of a grade (for example, from A to A-) will be deducted for each day that an assignment is late except in unusual circumstances such as medical emergencies (comparable to the incomplete grade policy above).

**OTHER STUFF**

**Transportation Seminar:** I encourage you to attend the weekly Transportation Seminar held on Fridays, noon to 1:00 p.m. in 204 Urban Center. The schedule of speakers and topics is at http://www.cts.pdx.edu/seminars. You can also watch the seminars on-line, live or archived. The seminar is available for one-unit of credit (USP 407/507).

**STEP:** The Students in Transportation Engineering and Planning is Portland State's transportation student group. If you are not already, I strongly encourage you to get involved in STEP for field trips, guest speakers, career planning, the annual Traffic Bowl competition and the annual Region X Student Conference, which will be held at Portland State this fall (mid-November).

**OTREC:** Portland State University is home to one of the U.S. Department of Transportation's 60 University Transportation Centers. The Oregon Transportation Research and Education Consortium offers a variety of resources including easy access to a wealth of transportation research. Following OTREC on twitter and facebook is also a good way to hear about interesting transportation news. (Full disclosure, it’s also my day job.)

**Transportation Planning Resources from the American Planning Association (APA) and Institute for Transportation Engineers (ITE).** Both of these organizations offer professional certifications for transportation planners. Until recently AICP (American Institute of Certified Planners) was the only professional certificate. ITE recently introduced its Professional Transportation Planner (PTP) certificate, followed almost immediately by APA’s Certified Transportation Planner (CTP) "advanced specialty certification." For your curiosity and future research, you might find APA’s transportation reading list and ITE’s PTP reference material interesting and informative.

**COURSE SCHEDULE AND READINGS**

- Week 1 (9/28): Introduction and Overview
- Week 2 (10/5): Plans, Part 1: Public Involvement and Equity
- Week 3 (10/12): Plans, Part 2: Air Quality, Climate, and ITS Plans
- Week 6 (11/2): Programs, Part 2: Models
- Week 7 (11/9): Programs, Part 3: Politics and Money
- Week 8 (11/16): Projects, Part 1: NEPA and Oregon's Transportation Planning Rule
- Week 9 (11/23): Projects, Part 2: Case Studies
- Week 10 (11/30): Projects, Part 3: Mega Projects
Week 1 (9/28)

Introduction and Overview

Topics Covered

- Syllabus Review
- Evolution of Transportation and Transportation Planning
- Who Plans
- Goals and Their Formulation
- Exercise: Pick a Plan

Readings (** indicates that the reading is available as an attachment at the bottom of the page)

  - Required: Chapter 3 (all) and Chapter 12 (section on ISTEA)
  - Recommended: Unabridged version if you really want to go to town or Abridged version
- USDOT Strategic Plan
  - Bush Administration (2006-2011). Required: Page 9 plus the section associated with any one goal that interests you (6-10 pages each)
  - Obama Administration (Draft, 2010). Required: Page 5 plus the section associated with any one goal that interests you
- Katz, Puentes and Bernstein, 2005: "Getting Transportation Right for Metropolitan America"
- Meyer and Miller, 2001**: Urban Transportation Planning, Chapter 4.3 "Developing a Community Vision and Goals Set"
  - Recommended: If you want to go really deep on the political history of ISTEA, "Creating a Landmark: The Intermodal Surface Transportation Act of 1991" by Richard Weingroff in FHWA's Public Roads Newsletter.
  - Recommended: History of Metropolitan Planning Organizations by staff at the North Jersey Transportation Planning Authority (an MPO)
  - Recommended: A statement on the floor of the Senate by the late, great Senator Daniel Patrick Moynihan regarding the introduction of ISTEA. **

Go to Week 2
Week 2 (10/5)

Plans, Part 1: Public Involvement & Equity

Topics Covered

- Public Involvement
- Equity & Title VI
- Exercise: Planning Timelines

Readings (** indicates that the reading is available as an attachment at the bottom of the page)

- TCRP: Public Participation Strategies for Transit
- Sanchez et al: Moving to Equity
- Baida and McDaniel: "Civil Rights in Transportation Projects" in NCHRP Legla Research Digest #48
- Recommended
  - NCHRP: Effective Public Involvement Using Limited Resources

Assignment

Come to class prepared to discuss your designated plan (selection made during class in week 1) with other students whose designated plans are from the same state. You will compare planning timelines and public involvement issues. Here are a few questions to help get you started:

1. When was your plan adopted?
2. Can you determine when the previous plan was adopted? When is the next one expected?
3. How long did it take to develop?
4. What kinds of public involvement strategies were employed?
5. How did the plan and public involvement strategy address equity issues?

Go to Week 3
Week 3 (10/12)

Plans, Part 2: Air Quality, Climate and ITS Plans

Topics Covered

- Air Quality Conformity (State Implementation Plans, Emission Budgets, etc.)
- Climate Changes (Climate Change Action Plans, Scenario Planning)
- Intelligent Transportation Systems (Plans, Architectures and Planning for Operations)

Readings (** indicates that the reading is available as an attachment at the bottom of the page)

- Howitt & Moore, 1999: Linking Transportation and Air Quality, Chapter 2 (pp 12-27), skim other sections as desired.
- Oregon Dept. of Land Conservation and Development, 2011: Cool Planning: A Handbook on Local Strategies to Slow Climate Change (concentrate on the Part I (introduction), the chapters of Part II that focus on transportation - especially parking - and part II, which describes the recommended process.
- USDOT: Developing, Using and Maintaining a Regional ITS Architecture. Read at least Chapter 1 (introduction).
- Recommended
  - Portland's Climate Action Plan (for a local example)
  - Cambridge Systematics, 2009: Moving Cooler: An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions. Read the executive summary (10 pages) for a quick exposure to some of the research; browse the website and associated documents for more details.
- Air Quality Conformity for Transportation Officials

Assignment

In support of the policy memo that is due in Week 4, arrange and conduct a phone interview with an appropriate member of the staff of your designated transportation planning entry. Write a journal entry summarizing both your interview and your reflections on the interview experience. You may submit electronically (email as an attachment to makler@pdx.edu with USP544 in subject line) by Noon or hard copy in class on 10/12 to be considered on time. 1 page limit.

Go to Week 4
Week 4 (10/19)

Plans, Part 3: Assets and Inventories

Topics Covered

- Exercise: Statewide Plan Coordination
- Assets
- Inventories
- Asset Management
- Fiscal Constraint

Readings (** indicates that the reading is available as an attachment at the bottom of the page)

- American Society of Civil Engineers, 2010: Oregon's Infrastructure Report Card. You can focus on transportation topics.
- One or both of the following FHWA overview documents:
  - Asset Management Overview, 2007
- FHWA Case Study: Life-Cycle Planning in Pennsylvania

Assignment

Prepare a technical memo to the executive or relevant senior manager of your designated transportation planning agency. Present a constructive critique of the existing plan's goals. Propose new ideas for the next iteration of the plan. Be sure to address both the substance of the goals and the process through which they are developed. Remember, you are recommending a change in the status quo so make your arguments clear and concise. Format your memo appropriately for professional correspondence. Your memo must be submitted (hard copy) at the beginning of class (on 10/19) to be considered on time.

Go to Week 5
Week 5 (10/26)

Programs, Part 1: Performance Measures and Evaluation Criteria

Topics Covered
- Performance Measures
- Evaluation Criteria
- Exercise: Examining Metro's TIP Criteria

Readings (** indicates that the reading is available as an attachment at the bottom of the page)
- Have you started reviewing Metro's MTIP documentation yet? (Available in Week 7 reading list)
- Sinha and Labi, 2007**: Transportation and Decision Making, Chapter 2 "Performance Measures in Transportation Evaluation" (pp. 21-35)
- Meyer and Miller, 2001**: Urban Transportation Planning, Chapter 9 "Program and Project Implementation" (pp. 565-617)

Assignment
Your assignment this week is to get up and close and person with some performance measures. In "Week 5 Homework.xls" - attached below - the first tab includes instructions. There are 3 questions to which there are correct answers and 1 question which is open. The second tab includes the source data - a table from the National Transit Database. You may ask your classmates for help if your spreadsheet skills are insufficient but you are expected to complete the assignment independently.

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Week 6 (11/2)

Programs, Part 2: Models

Topics Covered

- Transportation Demand Modeling
- Traditional 4-Step Model
- Recent Developments and Innovations

Guest Speaker: Roger Chen, Portland State University

Readings (**) indicates that the reading is available as an attachment at the bottom of the page)

- Have you started reviewing Metro's MTIP documentation yet? (Available in Week 7 reading list)
- Alan Pisarski, 2006: Commuting in America III, Executive Summary
  - Additional materials are available from TRB, including
    - A PowerPoint with dozens of additional figures
    - A 10-minute podcast
- Joseph Sussman**: Introduction to Transportation Systems, Chapter 10 (Models and Frameworks, pp. 115-133) and Chapter 11 (Modeling Concepts (135-146)
- Edward Beimborn: Inside the Black Box
- Transportation Models in the Policy-Making Process. Read at least "Panel 2: Integrating Transportation, Land Use and Environmental Analysis" (pp.13-21) with emphasis on "Case Study in Advocacy Modeling: Portland" by Keith Bartholomew and Keith Lawton as well as the discussion notes that follow.

Assignment

Pick three (3) figures from Commuting in America to discuss. For each, create a post in the course's Google Group that clearly identifies the figure (number, title and page/slide number). Feel free to discuss the topic addressed by the figure or the effectiveness of the figure at illustrating the concept. If a fellow student has already started a thread on the figure you have selected, join that thread rather than creating a duplicate (this won't harm your credit). As noted in the syllabus, participating in this forum can count the same as in-class participation.

Go to Week 7
Week 7 (11/9)

Programs, Part 3: Politics and Money

Topics Covered

- Exercise: Transportation Policy Alternatives Committee (TPAC) Role Play
- Funding and Finance

Guest Speaker: Ted Leybold (Metro)

Readings (** indicates that the reading is available as an attachment at the bottom of the page)

- Metro (Portland): Metropolitan Transportation Improvement Program, 2010-13 Adoption Draft
- Read about Oregon’s Least Cost Planning Initiative
  - July ’11 Project Update
  - Recommended: Background report by ODOT
- Some (short) position papers on transportation finance
  - Heritage Foundation
  - American Road and Transportation Builders Association (ARTBA)
  - T4America

Assignment (UPDATED ON 10/31!!)

Your second major assignment is a memo regarding the project selection process at Metro, the MPO for the Portland, Ore. metropolitan area. Detailed instructions and vital resources are available here. Format your memo appropriately for professional correspondence. Your memo must be submitted (hard copy) at the beginning of class (on 11/9) to be considered on time.

Go to Week 8
Week 8 (11/16)

Projects, Part 1: NEPA and the TPR

Topics Covered

- Project Planning 101
- National Environmental Policy Acts
- Environmental Streamlining and other responses to NEPA
- Project level public involvement, equity
- Project management, including phases, timelines
- Oregon’s Transportation Planning Rule (TPR)

Guest Speakers

- NEPA: Kate Lyman, CH2M HILL
- TPR: Prof. Sy Adler, Portland State Univ.

Readings (** indicates that the reading is available as an attachment at the bottom of the page)

- AASHTO’s NEPA Process Overview
- FHWA, 2008: Meeting Environmental Requirements after a Bridge Collapse. Read the introduction and at least 1 of the 4 case studies
- FHWA: "What is Context Sensitive Solutions?" overview web site
- ODOT: Practical Design introduction web site
- LCDC Memo regarding TPR changes
- Recommended Readings
  - I-405 (Seattle) case study re: NEPA innovation
  - For humor: "For NEPA Nerds" blog entry

Go to Week 9
Week 9 (11/23)

Projects, Part 2: Case Studies

Topics Covered
The purpose of this week’s class is to get as close as possible to a first-hand understanding of how actual projects come to life. We will have an in-class exercise related to the Red Line Extension case study. We will have presentations by project managers from local projects.

Readings (** indicates that the reading is available as an attachment at the bottom of the page)
- Case Study**: Extending the Red Line to Arlington, Parts A and B
- Please find and read at least one story/report/blog about TriMet's Portland Milwaukie Light Rail (PMLR) project, which will be presented in class.

Guest Speakers
- PMLR: Joe Recker (TriMet) and Jamie Snook (Metro)
- Washington County: Andy Back (Washington County Dept. of Land Use and Transportation)

Go to Week 10
Week 10 (11/30)

Projects, Part 3: Mega Projects

Topics Covered
In contrast to last week's class, which examined the practical realities of conventional projects, this week's class will examine the sometimes strange and bizarre realities of "mega-projects." There are many of these to choose from but we will examine Boston's Big Dig - because it is probably the modern prototype in this regard - and the Columbia River Crossing - because it is Oregon's reigning mega-project.

Readings (** indicates that the reading is available as an attachment at the bottom of the page)

- Case Study**: Boston's Central Artery/Third Harbor Crossing Project
- Columbia River Crossing Final EIS Executive Summary from www.columbiarivercrossing.org

Class Plan

- Watch Big Dig Documentary (12:45-1:45)
- Discussion of movie and case studies (Red Line conclusion, Central Artery/Tunnel)
  - Agree or disagree? "vocal community groups must be carefully heard but not allowed to dominate the greater public good"
  - Is the Dukakis/Salvucci "do no harm" doctrine tenable?
  - What is the ethical path regarding cost overruns?
- Discussion of CRC
  - How did the FEIS enlighten you?
  - Will adding capacity solve congestion or drive VMT growth (induced demand)?
    - Econ 101
    - Induced/latent demand and the 4-step model
- Final Exam Prep
  - Office Hours BY APPOINTMENT: 12/1, 12-4pm; 12/5, 10-12 and 1-4
- Beyond USP 544
  - More courses
    - USP 587 (Chen, Travel Demand Modeling, Winter)
    - USP 570 (Clifton, Transportation & Land Use, Spring)
    - USP 556 (Dill, Urban Transportation, Problems and Policies, Fall)
  - Career options
    - Professional groups: WTS, ITE, APA, YPT
    - Certifications: AICP (CTP); PTP
- Course Evaluations (3:30)
Final Exam

Your final exam, which represents 25% of your course grade, is to write an op ed column about a major transportation project. Format your writing as a PDF and submit it to me (makler@pdx.edu) by email by 11:59 P.M. on Wednesday, December 7, 2011; because this is a final exam, I will exercise a zero tolerance policy for work submitted late. Please note: I will reply on Thursday morning to confirm the receipt of your exam. It is your obligation to ensure that I have received your exam so if you don’t receive a reply, be sure to follow up!

Regarding the subject of your op ed, please respond to the following question (any valid position is welcome):
If, when and how should tolls be introduced across the Columbia river in the Portland/Vancouver metropolitan area?

I will apply the following criteria for the evaluation of your exam:

1. *Does the writing indicate that the student has mastered the subjects covered by this class?*
   To earn maximum credit, demonstrate your understanding of concepts from all ten weeks of the class. Think of this as a comprehensive final. (Syllabus: “The successful student will demonstrate mastery of transportation planning concepts, an ability to utilize data to support an argument as well as the ability to compose that argument in a clear and compelling manner that is appropriate to the audience.”)

2. *Does the writing represent an effective op ed column?*
   To earn maximum credit, follow David Sarasohn’s advice (from class on 11/23) and the resources I’ve provided below. Aside from length (500-750 words seems to be the consensus), you need to make a clear argument, marshal evidence, and be persuasive. You also must make at least references to at least two authoritative sources. I don’t expect you to pass as a journalism student but you must follow the rules.

Option: If you feel you are unable to meet all of the expectations within the parameters of an op ed, you may submit an accompanying fact sheet (one 8.5x11 page, single sided) to which your byline can refer, much as a real op ed might drive the reader to the author’s web site. All of the same criteria (use of data, audience-appropriate, etc.) still apply.

RESOURCES
Here are a few (similar) advice columns on writing an op ed

- http://newsoffice.duke.edu/duke_resources/oped
- http://www.atlantic-community.org/index/articles/view/How_to_Write_a_Convincing_Opinion_Article

And here’s an interesting (longer) essay specifically about science-oriented op eds and some of the risks: