SAN JOSÉ STATE UNIVERSITY
URBAN AND REGIONAL PLANNING DEPARTMENT
URBP 178
INTRODUCTION TO TRANSPORTATION AND URBAN PLANNING
FALL 2012

Instructors: Drs. Richard Lee and Charles Rivasplata
Office location: Washington Square 216G
Telephone: 510-540-0512 (Dr. Lee) / 415-701-5383 (Dr. Rivasplata)
Email: dr.r.w.lee@pacbell.net / charlesrivasplata@yahoo.com
Office hours: Wednesdays, 6:15-7:15 p.m.
Class days/time: Wednesdays, 7:30-10:00 p.m.
Classroom: Clark 308
Prerequisites: Upper division standing or instructor consent
Units: 3

Course Catalog Description:
Overview of urban transportation as a social essential. Technical, operational, social, environmental, land use, economic and fiscal aspects of urban transportation systems of all modes. Course may be repeated for credit when topic changes.

Course Description and Course Learning Objectives:
This course examines planning and policy-making for transportation systems, with particular attention to regional transportation. We consider theory and practice, as well as the wide gap between them. The historical evolution and development of key transportation institutions, policies, and methods are analyzed, using examples from California and beyond. The many roles of transportation planning – technical, mediating, advocacy, and political – are examined. Passenger and urban transportation planning and policy are emphasized, but there will be some attention given to intercity and freight modes. Many sessions and readings are devoted to understanding current transportation planning issues and policy debates.

This course is intended to help prepare students for employment as a transportation planner or a transportation policy analyst. There are a growing number of such positions with local, regional, and central governments, private consulting firms as well as with firms providing transportation services. This course alone will not, however, prepare students for more specialist transportation positions such as computer modeler or traffic engineer. For students interested in working in such specialist positions, additional course work would be required.
Though intercity and goods movement are addressed, the bulk of the course focuses on regional transportation policy and planning. The region is in many ways the proper scale for transportation planning, since daily travel occurs with little regard for city boundaries.

Moreover, the overriding economic rationale of metropolitan areas is that they save transportation costs – in metropolitan regions, complementary economic actors and resources are within close proximity to one another. Not surprisingly then, metropolitan regions are the predominant location of congestion on transportation networks, as too many people, goods and vehicles attempt to be in one place at one time for economic purposes. The most expensive and contentious transportation investments are those that serve urban regions.

Upon successful completion of the course, each student will be able to:

1. Discuss many of the critical mobility issues confronting the Bay Area and other metropolitan regions
2. List and understand relationships between the primary elements of transportation systems, such as modes, networks, controls and users
3. Describe the nature of travel demand and its relationship with travel supply and the operation of transportation systems
4. Know the broad outline of the history of transportation planning and institutions, as well as the evolution of transit, street and highway systems
5. Describe the scope of transportation environmental impacts.
6. Describe alternative approaches to financing transportation projects and services
7. Describe the role of national, regional and local planning in establishing transportation policies and priorities
8. Work as a transportation planner or a transportation policy analyst.

This undergraduate course is intended to provide an introduction to many of the key concepts of urban transportation planning. It does not include the Engagement Activity, required of students enrolled in the concurrent graduate course (URBP 226).

**Planning Accreditation Board (PAB) Knowledge Components**

This course partially covers the following PAB Knowledge Components: 1d, 1e, 1f, 2a, 2c, and 3c.

1d) Human Settlements and History of Planning: understanding of the growth and development of places over time and across space.

1e) The Future: understanding of the relationships between past, present, and future in planning domains, as well as the potential for methods of design, analysis, and intervention to influence the future.

1f) Global Dimensions of Planning: appreciation of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.

2a) Research: tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.
2c) Quantitative and Qualitative Methods: data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.

3c) Sustainability and Environmental Quality: appreciation of natural resource and pollution control factors in planning, and understanding of how to create sustainable futures.

A complete list of the PAB Knowledge Components can be found at http://www.sjsu.edu/urbanplanning/courses/pabknowledge.html.

Course Subject Matter
The main subject areas of this course include:

- Elements of transportation systems: vehicles, networks, controls – and users
- The nature of demand for travel and transportation
- History of transportation planning and institutions
- History of street and highway systems
- Dimensions of travel and the transportation sector
- Current travel and freight transportation trends and issues
- Traffic congestion issues
- Patterns of travel behavior: the peaking problem
- Overview of transportation modeling and forecasting
- Critical analysis of transportation modeling and forecasting
- Transportation and its environmental impact; analysis and mitigation of impacts
- Travel demand, land use and urban design
- Transportation Plans: National, Regional and Local
- Planning and financing street and highway systems
- Planning and financing public transportation
- Reauthorization of federal transportation funding
- Transportation planning and emerging technologies
- High-Speed Rail and intercity transportation
- Current issues in transportation policy

Required Course Readings:

Textbook
This textbook will be available at the SJSU Campus Bookstore.

Other Readings
These will either be provided in class or via the Internet. The lectures will not cover all of the material in the readings, so it is essential that you keep up with the required readings. Some of the readings have been assembled into a reader available from the instructor. For the research paper
you will be responsible for seeking out additional readings, and providing copies of key readings to your colleagues. The instructors will provide assistance with these tasks.

A Guide to the Readings

Before commenting on several of the supplemental readings (i.e., beyond the text), a few basic definitions are in order:

**Transportation** is a mediating process. Its primary purpose is to bring people and goods together for beneficial results. Demand for transportation is thus a *derived* demand; transportation is not generally desired for its own sake, but because it brings us (or brings us to) something desirable. The journey to work is not a good in itself, but it enables us to make a living, and that is the primary good. Bananas, not banana boats, are what people crave. Springtime in Paris is what is valuable and memorable -- the Boeing 747 is merely a convenient means to that end.

- **Travel demand** is the desire for travel or transport not necessarily fulfilled or expressed. When it is expressed via use of a transportation system, it is referred to as **traffic**.
- The basic elements of any transportation system include: (first and foremost) **passengers / customers** demanding transportation for themselves or their goods; and, on the supply side, **vehicles, routes and controls**.
- **Planning** is the reasoned application of available knowledge and tools to shape the future. Urban planning is concerned with planning for relatively dense areas (e.g., cities and dependent suburban and ex-urban areas), which are the locus of the majority of population and economic activities in both industrialized and developing societies.
- **Policy** consists of laws, rules and guidelines designed to ensure that the defined goals of an organization (public or private) or society as a whole are realized. **Policy Analysis** is bringing knowledge – which can take many forms – to bear in the process of policy making.

We have just defined transportation as a derived demand, rather than something desired for its own sake. We must immediately qualify this definition. Most transportation models and analyses assume transportation to be a bundle of costs (time, money, discomfort, etc.) to be avoided or minimized in pursuit of goods and activities at the destination. For most routine types of transport, this is valid.

Yet travel is not always onerous. The concept of a holiday, a positive experience we pay for (handsomely), has become synonymous with travel (“getting away”). Certainly, those marketing a travel mode or service often stress the intrinsic value of the trip itself, along with the allure of the destination. There is something inherently appealing about travel and transportation technology, and this should be borne in mind throughout your reading and the course as a whole. There is pleasure in and romance about transport. Such emotional aspects can complicate, even undermine transportation analysis, but for these very reasons they should not be forgotten or denied. Indeed, making transportation pleasurable is one of the key goals of transportation planning.

Notes on Individual Readings

*Introduction and Overview Section*


Basic reasons for why people travel and transportation goods; key concepts of transportation economics, including both freight and passenger transport.
You may skim this earlier edition of your text, which reviews key concepts such as accessibility vs. mobility; aggregate versus disaggregate measures of accessibility, and how changing urban geography interplays with changing urban travel demands.

Basic microeconomic principles applied to urban transport. Pay particular attention to Heilbrun’s distinction between private and social costs of transportation (and transportation congestion). You should also gain an understanding of some major economic rationales for congestion pricing and public transportation subsidy, as well as the elements of intermodal cost comparisons and of cost-benefit analysis.

A range of urban transportation policy proposals, derived from the preceding chapter’s economic analysis, are presented and critiqued, using mainly US case studies. Pay particular attention to the arguments for, and difficulties with, two particular policy proposals: congestion tolls and subsidies for public transportation (or “transit” as public transportation is called in North America).

The principles and elements of policy analysis: Dunn’s concept of “critical multiplism” – looking at policy problems from multiple angles – should be understood.

In an introductory chapter to a very influential book, Alan Altshuler outlines four categories of transportation innovation (which can be applied to either policy or technological innovations) in terms of acceptability and prospects for success, given a market economy and a representative democratic form of government. They are worth thinking about.

Here, Altshuler outlines nineteen different criteria for evaluating urban transportation system performance, as well as for evaluating strategies for improving urban transport.

*Transportation Modeling*

The authors’ stated intent for this primer is to explain how the urban transportation modeling process works, the assumptions made and the steps used to forecast travel demand for urban transportation planning in metropolitan areas. This is done both to explain the process and its implications and to help people to interpret and comment on its results. The primer is written
in plain language so it can be used by local or regional planning commissioners, elected officials and interested citizens who have to react to transportation plans.

**Transit and Highway Investments and Transportation Finance**

http://www.vtpi.org/cong_relief.pdf
This report critically evaluates the methods used to evaluate traffic congestion costs and the benefits of various congestion reduction strategies. It describes various biases in current congestion evaluation practices. It develops a more comprehensive evaluation framework which is applied to four congestion reduction strategies: Roadway expansion, improving alternative modes, pricing reforms, and smart growth land use policies. The results indicate that highway expansion often provides less total benefit than alternative congestion reduction policies. Comprehensive evaluation can identify more efficient and equitable congestion solutions. It is important that decision makers understand the omissions and biases in current evaluation methods. (Summary based on author’s abstract).

**Transportation Plans: National, Regional and Local (U.S. and Int’l Perspectives)**

This article reviews major events and trends in metropolitan transportation planning and policy in three quite different jurisdictions: New Zealand, Chile and California. Major metropolitan areas saw rising car ownership, congestion, and privatization of transportation services. There has also been devolution of planning authority and funding responsibility to metropolitan government. (Summary based on author’s abstract)

This book describes the evolution of transport policies and planning, linking the past with contemporary and future debates. It includes both a retrospective analysis of past planning, as well as a comparative analysis of experiences in different parts of the world. For this class, we are most interested in the constraints of transportation planning (Chapter 6), as well as transportation planning practices in Europe (Chapter 7).
Course Assignments and Grading Policy:

Your grade for the course will be based on the following URPB 178 assignments and activities:

<table>
<thead>
<tr>
<th>Assignment/Course Element</th>
<th>Percent of Course Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1: Tracking Travel Behavior</td>
<td>15%</td>
</tr>
<tr>
<td>Class Participation/Weekly Memos</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>35%</td>
</tr>
<tr>
<td>Final Presentation and Paper</td>
<td>35%</td>
</tr>
</tbody>
</table>

Assignment 1 entails tracking your own and one other person’s travel behavior over a period of two days. The full text of Assignment 1 will be provided before the second class meeting. Detailed grading rubrics for the Final Paper will be provided by the end of September.

Class participation grades will be based on active contributions to class discussions that reflect course readings and critical thinking about course themes. Students will be required to submit a ½-page summary/reaction memo each week for one of the assigned readings. In all, a maximum of 15 points will be awarded: one point for each summary/reaction memo (related to a weekly reading) and up to four points for class participation during the semester.

Term Paper Requirements

The term paper, worth 35% of the grade, entails a critical review of relevant literature and a policy analysis with recommendations for specific transportation planners or policy-makers. This paper will allow you to synthesize and extend knowledge gained in the course and, focusing on a specific area of interest to you. The schedule and requirements for the term paper are as follows:

1. By Week 3, everyone should meet with the instructors during office hours to discuss the term paper topic.
2. On November 7th, turn in a 3-page summary of your topic, plus a bibliography of key sources you are using for your final paper. This summary and bibliography will not be graded, but you will need to respond to comments from the instructors in your final term paper.
3. By December 5th, the last day of class, your completed 15-page research paper (double-spaced) is due. On that date you will also provide a 5-minute oral summary of your key findings to the class.

Further guidance and a rubric for the term paper will be provided by Sep. 19.

Possible Subject Areas for Papers and Presentations

Potential term paper subjects include the following:

1. Sustainability and Transportation
2. Transportation, Land Use and Climate Change – the Challenge and Promise of SB 375
3. Improving Regional Access to San José State and its Environ.
4. Policy Analysis of Gender, Aging and Other Demographic Transportation Issues
5. Analysis of the Prospects for Public Transportation in California and Its Cities
6. Analysis of the Prospects for High Speed Rail in California
7. Policy Analysis of Road and Parking Pricing Options
8. Getting More From Less: Management of Transportation Systems and Travel Demand
9. Land Use and Urban Form Policy in Relation to Travel Demand
10. The Future of the Automobile
11. The Future of Public Transit
12. Transportation and the Environment: Internalizing the Externalities
13. Telecommunications and Transportation
14. Other Subject Areas by Mutual Agreement.
15. The Regional Transportation Plan in the Bay Area
16. Topics in International Transportation Planning

Assignment Due Dates
The required work (listed above) will be due on the following dates/times:

Assignment 1:    Wednesday, September 12th at 7:30 p.m.
Take-Home Midterm Exam:     Thursday, October 25th at 9:00 p.m.
Final Paper Topic Outline:     Wednesday, November 14th at 7:30 p.m.
Final Term Paper and informal presentation:     Wednesday, December 5th at 7:30 p.m.

Other Grading and Assignment Issues
Classwork received late will be marked down accordingly.

Weekly Memo: If received within the first 24 hours after the scheduled deadline, it will be marked down 0.2 point (from a total of one point per memo). Thereafter, it will be marked down according to the following schedule:
1-4 days late: 0.4 point
4-7 days late: 0.6 point
Over 7 days: No credit given

Take-Home Midterm: If received within the first 24 hours after the scheduled deadline, it will be marked down one full grade. Thereafter, it will be marked down according to the following schedule:
1-4 days late: two full grades
Over 4 days: No credit given

Assignment 1 and Final Paper: If received within the first 24 hours after the scheduled deadline, it will be marked down 1/3 of a grade (e.g., from A- to B+, from B to B-, etc.). Thereafter, it will be marked down according to the following schedule:
1-4 days late: 2/3 of a grade
4-7 days late: 1 full grade
7-10 days late: 2 full grades

Extra credit is not available, except where mentioned on Assignment 1 and the Take-Home Midterm.
Course Workload
Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the length of the course for instruction or preparation/studying or course-related activities. Other course structures will have equivalent workload expectations as described in the syllabus.

Classroom Protocol
Students are expected to attend all class sessions, arrive on time, and turn off cell phones during class. If you must miss a class session, please notify the instructors in advance.

Academic Integrity Statement, Plagiarism, and Citing Sources Properly
SJSU's Policy on Academic Integrity states: “Your own commitment to learning, as evidenced by your enrollment at San Jose State University, and the University's Academic Integrity Policy requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Student Conduct and Ethical Development” (Academic Senate Policy S07-2). The policy on academic integrity can be found at http://www.sjsu.edu/senate/S07-2.htm. Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense both in the university and in your professional work. In essence, plagiarism is both theft and lying: you have stolen someone else's ideas, and then lied by implying that they are your own.

Plagiarism will lead to grade penalties and a record filed with the Office of Student Conduct and Ethical Development. In severe cases, students may also fail the course or even be expelled from the university.

If you are unsure what constitutes plagiarism, it is your responsibility to make sure you clarify the issues before you hand in draft or final work.

Learning when to cite a source and when not to is an art, not a science. However, here are some common examples of plagiarism that you should be careful to avoid:

- Using a sentence (or even a part of a sentence) that someone else wrote without identifying the language as a quote by putting the text in quote marks and referencing the source.
- Paraphrasing somebody else's theory or idea without referencing the source.
- Using a picture or table from a webpage or book without reference the source.
- Using data some other person or organization has collected without referencing the source.

The University of Indiana has developed a very helpful website with concrete examples about proper paraphrasing and quotation. See in particular the following pages:

- Overview of plagiarism at www.indiana.edu/~istd/overview.html
- Examples of plagiarism at www.indiana.edu/~istd/examples.html
- Plagiarism quiz at www.indiana.edu/~istd/test.html
If you still have questions, feel free to talk to me personally. There is nothing wrong with asking for help, whereas even unintentional plagiarism is a serious offense.

**Citation style**

It is important to properly cite any references you use in your assignments. The Department of Urban and Regional Planning uses Kate Turabian’s *A Manual for Writers of Research Papers, Theses, and Dissertations*, 7th edition (University of Chicago Press, 2007, ISBN-10: 0-226-82336-9). Copies are available in the SJSU King Library. Additionally, the book is relatively inexpensive, and you may wish to purchase a copy. Please note that Turabian’s book describes two systems for referencing materials: (1) “notes” (footnotes or endnotes), plus a corresponding bibliography, and (2) in-text parenthetical references, plus a corresponding reference list. In this class, students should use the second system, i.e., in-text parenthetical references.

**Accommodation for Disabilities**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the DRC (Disability Resource Center) to establish a record of their disability.

**Consent for Recording of Class and Public Sharing of Instructor Material**

Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.

**Library Liaison**

The SJSU Library Liaison for the Urban and Regional Planning Department is Ms. Toby Matoush. If you have questions, you can contact her at toby.matoush@sjsu.edu or 408-928-2096.

**SJSU Writing Center**

The SJSU Writing Center is located in Room 126 in Clark Hall. It is staffed by professional instructors and upper-division or graduate-level writing specialists from each of the seven SJSU colleges. Our writing specialists have met a rigorous GPA requirement, and they are well trained to assist all students at all levels within all disciplines to become better writers. The [Writing Center website](http://www.sjsu.edu/writingcenter/about/staff/) is located at [http://www.sjsu.edu/writingcenter/about/staff/](http://www.sjsu.edu/writingcenter/about/staff/).
URBP 178

FALL 2012
TENTATIVE COURSE SCHEDULE

I. A Brief Overview – August 22nd

Introductions:  Instructors and Students
Orientation, Review of University and Department Policy
Overview of Structure and Major Themes of the Course
Discussion of Engagement Activity
Student Evaluation: assignment, memos, midterm, presentation, term paper
Hand outs: Syllabus and Assignment 1, Readings CD (“R-CD”)

II. A Deeper Overview – August 29th

Readings: 1) TEXT: Preface;
2) R-CD: Begin “Introduction and Overview” readings.

TOPIC 1. Key Concepts of Transportation Planning
• Theories, processes and structures underlying passenger and freight transportation demand and supply.

TOPIC 2. Principles and Processes of Planning Applied to Transport
• Planning Public Policy and the Public Interest
• Planning, Development and Transport

TOPIC 3. Transport-Related Areas of Regulation and Policy
• Transportation Economics
• Land Use and Urban Development; Travel and Tourism; Trade and Commerce; Communications; Energy; and the Environment
• Public vs. Private Transportation
• Costs and Benefits – and whose are they?

TOPIC 4. Unifying Concepts in Urban Transportation Planning:
• Accessibility versus Mobility

III. History and Current Policy – September 5th

2) CD-R: complete “Introduction and Overview” readings, through Altshuler.

TOPIC 5. Urban Transportation and Transportation Planning Institutions
IV. Current Trends and the Policy Dilemmas They Pose – September 12th


TOPIC 6. Trends in Urban Travel
TOPIC 7. Demographic and Lifestyle Factors and Urban Travel Behavior

V. Travel Demand Modeling and Forecasting – September 19th

2) CD-R, Beimborn et al, Inside the Black Box.

TOPIC 8. Transportation System Supply: Facility and System Capacity
TOPIC 9. Introduction to Travel Demand Modeling and Forecasting
TOPIC 10. Critiques of Travel Demand Modeling: The State of the Art

VI. The Politics of Transportation Planning – September 26th

Readings: 1) TEXT: Chapter 6, Wachs, Martin, "Reflections on the Urban Transportation Planning Process;” and Chapter 8, Pucher, John, “Public Transportation.”

TOPIC 11. Public Transportation and Politics in the Bay Area

VII. Coping with Urban Transportation Congestion and Impacts: Alternative Views, Alternative Solutions – October 3rd

Readings: 1) TEXT: Chapters 9 (“Land Use”); Chapter 13 (“Environment”); and Chapter 14 (“Managing the Auto”).

TOPIC 12. The Problematic Problem of Congestion
TOPIC 13. Transportation-related Environmental Impacts
VIII. Transportation Finance – October 10th

Readings:
1) TEXT, Chapter 11, B. Taylor, “Urban Transportation Finance”


IX. Transportation Planning: The U.S. Experience – October 17th

Readings:
1) Metropolitan Transportation Commission. 2009. Transportation 2035 Plan for the San Francisco Bay Area (Change in Motion), Chapters 1 and 5 (pp. 5-20, 81-85). [www.mtc.ca.gov/planning/2035_plan/index.htm](http://www.mtc.ca.gov/planning/2035_plan/index.htm)

TOPIC 15. Transportation Plans: National, Regional and Local: the Challenge of Sustainability

X. TAKE-HOME MIDTERM by E-Mail: Sent out 6 pm Oct. 24th, Due 9 pm Oct. 25th

XI. Transportation Planning: The International Experience – October 31st

Readings:

TOPIC 16. Regional Planning Case Studies from cities around the World
XII. Freight Transportation – November 7th
Readings: 1) TEXT, Chapter 2, T. Leinbach, “City Interactions: The Dynamics of Passenger and Freight Flows

TOPIC 17. The growing importance and impact of Freight Transportation

XIII. Intercity High-Speed Rail: the California Case – November 14th
Readings: 1) TEXT, Chapter 2, T. Leinbach, “City Interactions: The Dynamics of Passenger and Freight Flows
2) High-Speed Rail Readings, TBA

TOPIC 18. High-speed rail is successful Elsewhere -- Why Not in California?

No Class: November 21st (Thanksgiving Holiday)

XIV. **URBP 226 Student Presentations: November 28th (All URPB 178 Students are Also Expected to Attend)

XV. **Student Presentations: December 5th (On Your Term Paper Findings)

TERM PAPER: Due 7 p.m. December 5th

Cumulative Exercise (Finals Week): Wed., December 12th – 7:45-10PM
Course wrap-up and discussion of findings from Student papers. Reflections on transportation the future, and advice on careers in Transportation Planning

Note: This schedule is subject to change, e.g., to accommodate special events and guest lecturers. Any changes will be discussed in class with as much notice as possible.