URPL-GP 2631

TRANSPORTATION, LAND USE, AND URBAN FORM

**Time:** Thursdays, 8:35-10:15pm, Fall 2013

**Where:** Waverly 431 (24 Waverly Pl)

**Instructor:** Geoff Morrison

**Office:** Rudin Center (in Puck Bldg, 295 Lafayette St, 2nd floor)

**Office Hours:** Thursdays/Friday, schedule by email

**Prerequisites:** Urban Economics, Urban Design (or by permission of instructor)

**QUESTIONS ANSWERED IN THIS COURSE:** How are transportation and land use connected? Do development patterns follow transportation development or do transportation systems follow development? Why does it matter? How do we best build cities to integrate transportation and land use?

**COURSE DESCRIPTION**
The objective of the course is to provide students with an in-depth understanding of the complex relationship between the transportation system, urban land use, and the city and regional-level planning process.

Transportation planning and policies facilitate the movement of information, goods, services, and people. The importance of transportation is reflected in the amount of time we spend traveling (about 70 minutes per day on average), our personal travel expenditures (about 15% of income), and overall expenditures for the construction, management, and usage of the transportation system (about 13% of the GDP).

The course focuses on the fundamentals of the demand and supply sides of transportation as well as providing an understanding of many of the societal issues constraining the provision of mobility to people and goods. The course is divided into three sections:

**Part One – Transportation History**
- Early transportation systems in the U.S.
- The history and planning of public transit in New York and other U.S. cities
- The introduction of the automobile and its implications for urban form.

**Part Two – Transportation Theory and Planning Today**
- The link between the built environment and residential self-selection
• The role of federal, state, and local transportation and land-use agencies
• Infrastructure improvement and “Induced traffic demand”
• Traffic and the “Triple Convergence”
• Theories of good and bad urban form
• Role of the federal, state, MPO, and city-level policy

Part Three – Transportation of the Future
• Forecasting global transportation systems
• Transportation systems in developing countries

COURSE REQUIREMENTS

Lecture and Discussion Participation (15% of grade)
Each class will have a lecture component, but discussion is encouraged (and required!). Part of your grade is based on attending class and participating in the discussion. Attendance at each is essential. Everyone should feel comfortable contributing their thoughts and questions to the discussion. If you have any questions about this requirement, please let me know.

Reading (15%)
The lectures will not cover all of the material in the reading, so it is essential that you keep up with the required reading. I will give 3-5 questions the week before which will be our jumping off point for the reading.

Class Projects (45%)
Three written assignments (15% each) are required (see below). All written assignments should be submitted to the NYUHome website by the stated date and time. Late papers will be accepted, but a late grade penalty of 1/3 grade per day will be applied to any papers turned in after the due date. The late penalty for assignments can be waived only with a written note from a medical professional.

Quiz (25%) There will be one quiz on Thursday Nov. 21st.

Innovation Interludes
Task: Give an example of a transportation initiative or measure implemented by a country, state, city, neighborhood, etc. that is either: (1) very creative/effective or (2) totally ineffective. Use concepts from class to support your claim.
Length: ~5-10 minutes, halfway through class on your given date (you will only do this once in the semester)
Medium: Use any medium you want (slides, class discussion, charrette, game, etc.)
Note: some of the more interesting discussions may be about initiatives that are ineffective!

Schedule (14 classes)
5 Sept. – Introduction, mobility vs. access
12 Sept. – History of Transportation. Travel Time/Money Budget as explanation for sprawl
19 Sept. – Introduction to Economic Location Theory
26 Sept. – Transportation Land Use Connection
10 Oct. – Parking
17 Oct. – Traffic Congestion and Induced Demand
24 Oct. – Travel Behavior
31 Oct. – Guest Lecture. DOT Safety Team (Jesse Mintz-Roth)
7 Nov. – International transportation (ITDP guest lecturer, Michael Kodransky)
14 Nov. – Guest lecture. CitiBikes (Communication Director, Dani Simons)
21 Nov. – Transit-Oriented Development, Congestion Pricing – Quiz
5 Dec. – International transportation planning
12 Dec. – Freight Transportation, Zoning

Class Projects

Project #1 – Historical Perspective in Magazine or Blog

We have seen (or will soon see) how new transportation technologies and programs help shape land use patterns and vice versa. Write a historical perspective piece that discusses an important historical development in the transportation sector and why the development impacted land use. Imagine you are writing this for a popular magazine or blog and that you want to capture the interest of the reader while maintaining historical accuracy. The development can be spatially and temporally specific (e.g. the construction of the Verazzano Bridge) or it can be a more general trend (e.g. increases in single occupancy vehicle use).

Feel free to choose from the list of topics below or pick your own topic. You will be graded on you clarity, content, and style.

- What has led to the increase in single occupancy vehicles (SOV) (i.e. reduction in carpooling) since 1960? Why does it matter for land use?
- For two cities of equal population sizes, Boston and Atlanta have dramatically different transportation systems and land uses. Why?
- Although the U.S. and Europe both had increases in income in the 20th Century, sprawl is much more prevalent in the U.S. cities. Why?
- What killed transit in American cities?
- Why is or isn’t the city of Detroit a “dying city” in terms of its transportation and land use?
- How did the invention of the elevator affect our land use and transportation systems?

Length: The precise length does not matter but should probably be somewhere between 4-8 pages, double-spaced. Figures, pictures, and tables are welcome as long as they add to your argument.
Due date: Sept. 30th (by midnight)

Project #2 – Critical Essay

A great deal of mental energy has been expended in the past twenty years or so on the relationships between transportation, land use, and urban form. Concepts such as accessibility, sprawl, historic patterns of transportation and land use, jobs-housing balance, spatial mismatch, smart growth, transit-oriented development, pedestrian-oriented development, New Urbanism, and others have
all been conceptualized and debated. This assignment asks you to jump into the debate on a topic of your choosing. You should select a particular topic related to urban planning and theory and create an argument as to why one side of the debate is flawed or spot on. You can draw on the literature to critically assess your topic, and you can advance your own argument or ideas as a counterpoint. Topics you are welcome, but not required, to explore are:

- Will denser development reduce the amount we travel? (i.e. to what extent do people select into neighborhoods that fit their travel desires?)
- Will opening a new public transit system in a city reduce the amount of auto-related congestion?
- Does online shopping reduce total travel? (i.e. it likely reduces an individual’s travel miles traveled but does it reduce travel overall?)
- Should we charge for parking everywhere? Have parking fees been effective in the past?
- Can new transportation systems re-shape urban form?
- Is there a spatial mismatch in cities?
- Can neo-traditional or transit-oriented developments attract residents and reduce auto use?

The key is to not just summarize, but to critically assess the validity of arguments, bringing in other research and/or your own thinking.

Length: Precise length is not important, but 4-8 double-spaced pages should suffice.
Due Dates: Oct. 27th (by 11:59pm)

Project #3 – New Innovations

Analytical Memorandum
Pick a place and write about how its transportation and land use features work (or don’t work) together to shape the way individuals live and behave. Make an argument about how the place can be improved, or how its success can be replicated in other places. Remember to tie your analysis into the class discussion and readings wherever appropriate. Frame your analysis as a memo to an organization (real or imagined) that is seeking to improve or learn from your chosen place.

Length: Precise length is not important, but 4-8 double spaced pages of writing should be sufficient, not including the documentation.

Due Dates:
Dec. 15th (by 11:59pm)

Elements to consider:
- Place – What scale of place are you documenting? It can be a street corner, a road, a neighborhood, a city, or even larger. Is this an existing place, a historic place, or a planned place?
- Documentation – Make sure you can obtain documentation to back up the assertions you make. Photos, videos, maps, drawings, articles, and policy documents are all valid.
- Characterization – Apply the concepts and theories in this course, as relevant to your analysis. How does the transportation infrastructure drive the land use, vice versa, or both? Is there an important historical dimension? Is this an example of a specific transportation-land use phenomenon (e.g. sprawl, smart growth)? Who uses this place?
- **Analysis** – Make an argument about the place. Does it work, is it flawed? Why? Are there arguments to be made about equity or sustainability? Think in terms of real urban policy goals, which you can “assign” to the organization to which the memo is addressed.
- **Recommendations** – Develop recommendations based on the course, whether as policy or design, either for how to improve the place or what elements of the place should be replicated elsewhere.