

**UPP 565 Urban Mass Transit Planning & Technologies SyllaBUS**

**Call #17228**

LOCATION & TIME: Room 2234 ADH, Tuesdays 9:00am -11:50am  
INSTRUCTOR: Michael J. Shiffer, mshiffer@uic.edu, 312-545-7592  
CREDIT: 4 hours

MOTIVATION: How have the various modes of public transportation evolved? How do they work? Can they be made to work better? If this is the age of the automobile, why are so many new lines under construction around the US (and the world)? What's in store for Chicago?

In this seminar we will explore the technical developments, design, operations, unique systems and common characteristics of urban passenger transportation through the years. We will also discuss recent developments such as emerging new transit lines throughout the world. We will pay special attention to new forms of data collection and how this can lead to 'better informed' planning. Other topics include 'how to make buses more competitive' and the thorny policy issues that pop up from time to time when serving such a socially and geographically diverse population. In addition to a discussion of relevant readings, seminar activities will include multimedia presentations and field visits to view key aspects of Chicago's transit system. Finally, we will explore the impact of new and emerging information technologies (IT) on the planning and operations of these systems.

GOALS: The aims of the seminar are to: (1) familiarize participants with the modes and operational characteristics currently available for urban mass transportation; (2) expose participants to several cases where these transit technologies have been used, or are in use around the world; and (3) understand the impact of transit on urban form.

REQUIRED TEXT: Transit Cooperative Research Program (2003) Transit Capacity and Quality of Service Manual (TCRP Report 100). Washington, DC: Transportation Research Board. [http://trb.org/news/blurb\\_detail.asp?id=2326](http://trb.org/news/blurb_detail.asp?id=2326) **Additional materials will be assigned throughout the semester and provided electronically.**

CLASS PARTICIPATION & GRADING: You are expected to attend all sessions of the seminar. (If illness or another factor prevents you from attending, please contact the instructor PRIOR to the meeting). Grades will depend on a combination of attendance, your final project, assignments, quizzes, field trip reports and your in-class participation (described in the context of the activities below).

CLASS ACTIVITIES: Each class will consist of one or more the following activities:

**Lectures-** A lecture to be given by the instructor, guest lecturer or class participant on an urban transit-oriented subject of their choosing. You will be expected to review two scholarly articles related to mass transit in presentations to the class over the course of the semester.

**Discussions-** of recent readings. If this gets too flat, we may need to throw in a quiz to keep you on your toes!

**Field Visits-** First-hand experience of actual sites and operations in the transit field around Chicago. The week after each visit you must submit a brief report on your observations.

**Motion Picture Archives-** A selected historical, operational, artistic or promotional presentation that describes an aspect of urban rail transit. (To be followed by a related discussion or a short quiz -again to keep you on your toes).

**Central Electric Railfan Association Meetings** -An optional exercise that involves a visit to a regular monthly meeting of this group of urban transit aficionados. Meetings (open to the public) are held on the 4<sup>th</sup> Friday of the month at 7:00PM, in the Lake Room on the 2nd floor of University Center at 525 S. State Street, (State and Congress).

KEY RESOURCES: Much additional reading material related to this class can be found online by searching the National Transportation Library maintained by the USDOT's Bureau of Transportation Statistics at: <http://www.bts.gov/NTL/> Additional sites will be distributed to the class via e-mail throughout the semester. Students are invited to contribute transportation-related URLs that they feel are relevant to the class!

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**TENTATIVE Topic Plan (subject to change).**

Appropriate readings will be assigned as the semester progresses. Additionally, several guest lectures on transit-related topics will be scheduled throughout the semester.

- 1/13 Intro and Hot Transit Topics (with Guest Lecturer due to TRB Annual Mtg)
- 1/20 Personal Transit Experiences / Transit Background Part I: From Horses to Horsepower
- 1/27 Transit Background Part II: Construction and Ridership through the mid-twentieth century.  
**Due: Assignment #1- One to two pages on who you are, your mass transit experience and issues you would like to explore –Feel welcome to illustrate.**
- 2/3 Transit Background Part III: Decline & Rebirth
- 2/10 Finance Models  
**Due: Assignment #2- Article Review A**
- 2/17 Transit Technologies
- 2/24 Field Visit #1: Subways & Large Facilities
- 3/3 System Growth /Rebuilding Infrastructure  
**Due: Assignment #3- - Article Review B**  
**Field Notes #1**
- 3/10 Field Visit #2: Commuter Rail & Express Bus
- 3/17 Transit: The International Perspective Emerging Technologies & Techniques  
**Due: Field Notes #2**
- 3/24 SPRING BREAK –NO CLASS
- 3/31 New Planning Starts and Applications of Technology  
**Due: Assignment #4- Mode Capacity Exercise**
- 4/7 Field Visit #3: Transport-Land Use Interaction  
**Due: Assignment #5 Final Project Progress Report**
- 4/14 Field Visit #4: Intermodal Facilities  
**Due: Field Notes #3**
- 4/21 State of the Practice & Career Paths “What you’ve learned to date”  
**Due: Field Notes #4**
- 4/28 **Final Project Presentations & Discussion**  
**Due: Final Project Paper**