

UPP 562_SP07

Urban Transportation Planning III: Laboratory

Time: Wednesdays 6:00 – 9:00 PM
Class Room: 305 2 LH, SEL2249F or 251 CUPPAH (see attached schedule)

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Office Hour: By appointment

Course Description

This course introduces students to various techniques commonly used in urban transportation planning. Usually, in the first half of each class, I will introduce and discuss the theoretical background of specific technique(s) used by transportation professionals. In the latter half, students will learn how the techniques are actually used by conducting actual analysis. Each lab is designed to introduce students to new techniques. There is no examinations or tests for this course.

Text

There is no textbook for this course. Handouts will be given in the class or distributed via Couseinfo.

Useful References

- John Edwards ed.. *Transportation Planning Handbook*. Institute of Transportation Engineers, 1999
- John Dickey, *Metropolitan Transportation Planning*. Taylor & Francis, 1983
- Khisty and Lall. *Transportation Engineering: An Introduction*. Prentice Hall 1999
- Miller and Meyer. *Transportation Planning: A Decision Oriented Approach*. McGraw Hill 1984

Requirements

Each student will submit a report for each lab assignment. Grades will be based on 4 lab assignments/reports/presentations (90%), and class attendance/participation (10%). You may work in groups, but reports must be produced and submitted individually. The grades will be based on the quality of analysis as well as organization and presentation of the analysis results.

This is not a difficult course to do well if you keep up with the material. However, there are considerable amount of work to be done each week and you have to be on your toes while you are in the classroom. Conversely, **missing a class will cause a dire**

consequence for most students. If you have to miss a class for an unavoidable reason, it is your responsibility to make arrangements with other students or me so that you do not fall behind.

For students who have never used the computers in the CUPPA lab (RM 251), you will need to set up an account. Please send an e-mail to CUPPATECH@UIC.EDU to make necessary arrangement. My suggestion is since March 21 will be the first time the class will be held in 251 CUPPA, you can make an arrangement to meet someone from CUPPATECH (folks who do computer administration for CUPPA) before that date to set up an account. It should only take a few minutes.

Tentative Schedule:

1/17 ¹	Full cost of transportation	Some basic concepts
1/24	No class (TRB)	TRB meeting in Washington D.C.
1/31 ²	Traffic impact study (part 1)	Overview, basic economic analysis (Economic base projection, location quotient technique)
2/7 ²	Traffic impact study (part 2)	Spatial-interaction model. Land use projection and Origin-Destination table.
2/14 ²	Traffic impact study (part 3)	Shortest path and incremental traffic assignment.
2/21 ²	Traffic impact study (part 4)	Analysis of traffic conditions
2/28 ²	Traffic impact study (part 5)	Report organization and writing, Planning field data collection
3/7 ²	Intersection study (part 1)	Intersection analysis fundamentals, data collection planning
3/14 ²	Intersection study (part 2)	Data collection, report writing
3/21 ³	Demand forecasting using TransCAD	4-step travel demand forecasting using a computer software
3/28	No class (Spring break)	
4/4 ³	Transit LOS analysis using ArcGIS (part 1)	Accessibility index method
4/11 ³	Transit LOS analysis using ArcGIS (part 2)	Florida DOT transit LOS method
4/18 ²	Corridor study (part 1)	Fundamentals of analysis of traffic flow, queuing model
4/25 ²	Corridor study (part 2)	Mode choice model
5/2 ²	Corridor study (part 3)	Emission analysis, cost effectiveness analysis
5/9 ⁴	Presentation of Intersection Study	

- 1 - meet in 305 2LH
- 2 - meet in 2249 F SEL
- 3 - meet in 251 CUPPA Hall
- 4 - tentative date, meet in 305 2LH