

# **CE & CRP 775 Urban Transportation Planning (4 units)**

**Fall 2009**

**Period 1: Sept. 23 – Oct. 28**

## **Instructor**

Rabi Mishalani

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## **Meeting Time and Place**

Lectures: Monday and Wednesday 3.30 – 5.18  
Knowlton Hall, Room 195

Office hours: Tuesday 10.30 – 12.18 or by appointment  
Room 491C Hitchcock Hall

## **Description**

Period 1 of this course motivates the need for forecasting travel demand and introduces the four-step process to do so. Subsequently, of the four steps, trip generation (the first) and traffic assignment (the fourth) are covered in detail.

## **Requirements**

1. Readings: class handouts.
2. Problem Sets (40%).
3. Exam (60%): in-class on Wednesday October 28 (5th full week).

## **Policy on Academic Misconduct**

The solution to the problem sets and exams should be each student's own independent work. Any deviation from this requirement constitutes an act of academic misconduct and will be addressed in a strict and serious fashion.

OSU defines academic misconduct "as any act that undermines the academic integrity of the University or subverts the educational process. It includes plagiarism and dishonest practices associated with examinations as well as any other form of misconduct associated with academic work or grading. Plagiarism is the act of taking ideas, writings, or drawings of another and offering them as one's own. Plagiarism may be copying of someone else's work, word-for-word, in part or in the whole without acknowledgment. Other forms of plagiarism involve paraphrasing the structure and language of another person's work by changing the order or omitting sentences, or writing based strictly on the ideas of another."

## References

The following (except for the second item) are placed on reserve at the Science and Engineering Library:

Metropolitan Transportation Planning (2nd edition), J.W. Dickey (ed.), McGraw-Hill, 1983 (pp. 169-197) (OSU call number: HE305 .M47 1993).

Transportation Demand Analysis, A. Kanafani, McGraw-Hill, 1983 (pp. 105-114).

Principles of Highway Engineering and Traffic Analysis, F.L. Mannering and W.P. Kilareski, John Wiley and Sons, 2005 (pp. 168-181, 227-233, 235-237) (OSU call number: TE147 .M28 2005).

Urban Transportation Planning: A Decision-Oriented Approach, M.D. Meyer and E.J. Miller, McGraw-Hill, 1984 (pp. 244-250) (OSU call number: HE305 .M49 1984).

Urban Transportation Modeling and Planning, P.R. Stopher and A.H. Meyburg, D.C. Heath, 1975 (pp. 62-64, 109-125) (OSU call number: HE305 .S84).

## Topics

1. Introduction to Urban Transportation Planning
2. Motivation for Demand Forecasting and Basic Concepts
3. Growth Factors Approach
4. Four-Step Process
5. Trip Generation: Concept
6. Trip Generation: Cross-classification Approach
7. Trip Generation: Regression Modeling Approach
8. Traffic Assignment: Link Performance Functions
9. Traffic Assignment: Concept
10. Traffic Assignment: Methodology