

# Case Studies in Transportation Engineering

- Fall 2015 -

**Norman W. Garrick**

University of Connecticut

FLC 330

860 486 2990

Office Hours

MTu 2:30-4:00 pm

(Or by Appointment)

Teaching Assistant

Lori Fomenko



Class Time and Place

FLC 212

MW 4:40 to 5:55 pm

Course Description

Course Schedule

## Course Description

### Course Overview and Objectives

This class is for new Transportation and Urban Engineering graduate students and for advanced Civil Engineering undergraduates. The course objectives are as follows:

1. Develop an understanding and knowledge of the elements of effective transportation planning
2. Develop an understanding of the interdependency of transportation and land use planning
3. Foster knowledge of the societal impacts of transportation decisions
4. Foster knowledge of the economic, political and institutional structures that govern transportation policy making
5. Improve written and oral communication skills

The class will be organized around studying cities that are some of the most effective globally in terms of sustainable transportation and land use planning. The goal of the class is to learn from these cities. Specifically we want to look at:

1. How and why they developed their approach to planning?
2. What goals have they tried to advance?
3. What procedures and techniques they have implemented to achieve their goals?
4. What changes were needed in policy and governance in order to advance their goals (how do these policies differ from the conventional approach in other less successful cities)?
5. How successful have these places been in moving towards their goals?

## Assignments and Projects

The class project will be conducted in groups but will have both a group and an individual component.

This project will require three in-class presentations as well as a final report. Each student will be fully responsible for their section of the report. The final report for each group should be no more than 12 type written pages, inclusive of figures and tables.

The exams will be based on the written reports for the homework assignments, class notes, in-class discussion and all the project reports.

In addition to the regular assignments, CE 5710 will be required to produce a short study guide summarizing the project results for two of the cities studied in the class. The selected cities should not include the one that you had primary responsibility for studying.

Assessment	
Presentation	20 %
Project Report	25 %
Homework	10 %
Mid-term Exam	20 %
Finals	25 %
<b>Total</b>	<b>100 %</b>

## Course Schedule

Date	Topic	Readings/Video	Assignments
M. Aug.31	1. <a href="#">The Role of Transportation in Cities</a>		
W. Sept.02	2. <a href="#">The Foundations of Transportation Planning</a>	<a href="#">Understanding Bias in Transportation Performance Measures</a>	HW 1
M. Sept.07	Labor Day		
W. Sept.09	3. <a href="#">Transportation and The Structure of Cities</a>	<a href="#">Marshall - Chapter 2 pg 41-59</a>	HW 1 Solutions
M. Sept.14	4. <a href="#">What is Transportation For?</a>	<a href="#">Mumford - Chapter 22</a>	HW 2
W. Sept.16	5. <a href="#">The 1960s Struggle Against Car Hegemony in Amsterdam</a>	<a href="#">Jordan - Chapters 16 and 19</a>	
M. Sept.21	6. <a href="#">Transportation, City Form, Energy Use and Sustainability</a>	<a href="#">Newman and Kenworthy Ch 3</a>	HW 3 HW 2 Solutions
W. Sept.23	7. <a href="#">Characteristics of Effective Transit</a>	<a href="#">Walker - Chapter 2</a>	
M. Sept.28	8. <a href="#">Sustainability and Autodependency</a>		HW 4 HW 3 Solutions
W. Sept.30	9a. <a href="#">The Term Project</a> 9b. <a href="#">Effective Technical Presentations</a>		City Selection Study Guide Exam 1
M. Oct.05	10. Guest Lecturers: Hamed Ahangari, Ben Wargo, and Adam Polinski		HW 4 Due City Selection Due
W. Oct.07	Mid-term Exam		
M. Oct.12	Project Group Lab		
W. Oct.14	Project Group Lab		
M. Oct.19	Project Group Lab		
W. Oct.21	Project Group Lab		
M. Oct.26	1st Presentation		
W. Oct.28	Project Group Lab		
M. Nov.02	Project Group Lab		
W. Nov.04	Project Group Lab		
M. Nov.09	2nd Presentation		

W. Nov.11	2nd Presentation		
M. Nov.16	Project Group Lab		
W. Nov.18	Project Group Lab		
M. Nov.23	Thanksgiving Break		
W. Nov.25	Thanksgiving Break		
M. Nov.30	Project Group Lab		
W. Dec.02	Project Group Lab		
M. Dec.07	3rd Presentation		<i>Study Guide due</i>
W. Dec.09	3rd Presentation		<i>Report due Dec. 11</i>
Tu. Dec 15	Final Exam 3:30 to 5:30 pm (CAST 212)		
<b>Date</b>	<b>Topic</b>	<b>Classnotes/Readings/Video</b>	<b>Assignments</b>

### Reading List

1. Walker, Jarrett, Human Transit: How Clearer Thinking about Public Transit Can Enrich Our Communities and Our Lives, Island Press, 2011.
2. Leitman, J., 1999, 'Sustaining Cities: Environmental Planning and Management in Urban Design', McGraw Hill, New York
3. Cervero, Robert, The Transit Metropolis - A Global Inquiry, Island Press, 1998.
4. Marshall, Alex, How Cities Work: Suburbs, Sprawl and the Road Not Taken, University of Texas Press, 2001.
5. Munford, Lewis, The Highway and the City, Mentor Book, 1963.
6. Newman and Kenworthy, Sustainability and Cities: Overcoming Automobile Dependence, Island Press, 1999.
7. Plowden, Steven, Towns Against Traffic, Deutsch, 1972.
8. Jordan, Pete, In The City of Bikes, Harper Perennial, 2013.

[Course Description](#)

[Schedule](#)

all photographic credits - Norman W. Garrick