COURSE SYLLABUS

Overview:
This is a course in transportation economics and policy for undergraduates. Students will learn how to use economic theory and empirical tools to analyze transportation markets and policies. The course combines topics from environmental economics and industrial organization including: aggregate demand for transportation; disaggregate demand and mode choice; externalities and the costs of driving; and policy instruments such as fuel taxes, the corporate average fuel economy program (CAFE), low carbon fuel standards and congestion pricing. Instruction will emphasize the current literature and examples from recent policies.

Office Hours and Contact Information:
Professor: Jonathan Hughes
Office location: Economics 4B
Office hours: Mondays and Wednesdays from 2:00-3:30 pm (or by appointment)
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Recommended Texts:
There is no required textbook for this course. However, much of the material for the course will drawn from the text below. Readings from the text are denoted as “Essays” in the course syllabus.


Copies are on reserve at Norlin Library. The text is also available as an ebook from the CU NetLibrary (see Chinook catalog) and for purchase online.

Reading/Class Participation:
Throughout the course I will assign readings to supplement the lecture material. Readings noted in the syllabus can be found on the web. Those not on the web will be posted to the course web site several days in advance. Please come to class each day ready to discuss the assigned reading. Please prepare a ½ page executive summary of each paper that discusses: the key
findings of the paper; major assumptions or limitations of the analysis; issues of relevance for policymaking. I will randomly select several of these summaries during the semester to evaluate as part of your class participation grade.

* Denote readings in the course schedule for which you are to turn in an executive summary.

Grading:
15% Class participation
25% Problem sets
30% Midterm exam
30% Final exam

Problem Sets and Empirical Exercises:
Throughout the course students will be assigned problem sets that represent a mix of theory and empirical work. For empirical exercises, we will be using data from recent studies and published government reports. The class will meet in a campus computer cluster to begin these exercises, though students may be expected to complete these assignments outside of class. An important goal of this course is to expose students to the data sources used to analyze transportation markets and policies. Due dates are listed on the course syllabus.

Examinations:
There will be an in class mid-term exam on Wednesday October 29, 2014 and a final exam on Sunday December 14, 2014 from 7:30 – 10:00 pm.

Late Assignments and Missed Examinations:
Problem sets and other assignments are due before the start of class on the date due. No late assignments will be accepted except in the case of documented medical or family emergency. No make-up exams will be given. If you foresee a conflict, contact me as soon as possible in order to make alternate arrangements for you to complete the requirements of this course.

Lecture Notes: My lectures will make use of both the chalkboard and Powerpoint. The lecture slides and graphs can be downloaded from the class web site, available through D2Learn. Please visit this class website often.

Campus Policies: I will adhere to all campus policies with respect to disabilities, religious observances, appropriate behavior, discrimination and harassment, and academic conduct. See http://www.colorado.edu/policies/

Tentative Course Outline:

Week 1: Overview: transportation markets, energy and the environment
   August 25. Introduction - course goals, thinking like an economist
   August 27. Market for driving
   August 29. Gasoline demand
Week 2: Aggregate demand for transportation
September 1. Labor Day Holiday – No class
September 3. Gas prices, fuel economy and vehicle choice
September 5. **Computer Lab BESC 385.** Introduction to empirical analysis
Reading: “What is econometrics”
**Problem Set 1 Distributed**

Week 3: Environmental economics review
September 8. Measures of value, measures of waste, efficiency
September 10. Externalities, marginal private and marginal social cost
September 12. **No Class - Problem Set 1 Due to Economics Office 210**

Week 4: Costs of driving
September 15. Driving-related externalities
September 17. Finding the “Right Gasoline Tax”
Reading: *Parry and Small. “Does Britain or the U.S. have the right gasoline tax?” American Economic Review (2005).
September 19. **Computer Lab BESC 385.** Air pollution
Reading: “Essays” Chapter 7
**Problem Set 2 Distributed**

Week 5: Costs of driving
September 22. Air pollution cont.
September 24. Unintended consequences of clean fuel regulation
September 26. Climate change
Reading: IPCC 4th AR Summary for Policymakers
**Problem Set 2 Due**

Week 6: Costs of driving – continued
September 29. Carbon trading
Reading: TBD
October 1. Low Carbon Fuel Standards
October 3. **Computer Lab BESC 385.** Renewable fuel standards
**Problem Set 3 Distributed**
Week 7: Costs of driving – continued
October 6. Biofuels

October 8. Fuel economy standards

October 10. Highway fatalities

**Problem Set 3 Due**

Week 8: Costs of driving – continued
October 13. Highway fatalities revisited
*Reading:* TBD

October 15. Congestion and value of time
*Reading:* “Essays” Chapter 6

October 17. **Computer Lab BESC 385.** Congestion and value of time

**Problem Set 4 Distributed**

Week 9: Disaggregate demand for transportation
October 20. Mode choice
*Reading:* “Essays” Chapter 2

October 22. Vehicle choice
*Reading:* TBD

October 24. Vehicle choice

**Problem Set 4 Due**

Week 10: Disaggregate demand for transportation
October 27. Catch-up and review

**October 29. Mid-Term Exam**

October 31. **Computer Lab BESC 385.** Congestion.

**Problem Set 5 Distributed**

Week 11: Public transportation
November 3. Public transportation
*Reading:* “Essays” Chapter 11

November 5. Should transit be subsidized?

November 7. Public transportation cont.

**Problem Set 5 Due**

Week 12: The firm and market power review
November 10. Monopoly (inc. price discrimination)
November 12. Oligopoly and firm interaction
November 14. Oligopoly and firm interaction

Problem Set 6 Distributed

Week 13: Freight transport
November 17. Economies of density and network size
Reading: “Essays” Chapter 3
November 19. Railroad deregulation
Problem Set 6 Due

Fall Break November 24 – November 28

Week 14: Air travel
December 1. Market power in air travel
December 3. Entry and competition in air travel
Problem Set 7 Distributed

Week 15: Deregulation
December 8. Trucking deregulation
December 10. Railroad deregulation
December 12. Catch-up and review
Problem Set 7 Due

December 14. Final Exam 7:30 – 10:00pm