

Professor Robert Feenstra
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Office hours: Mon. 1:30-3:00, Thurs. 1:30-3:00

Lecture Time/Location: TR 9:00 – 10:20 in 209 Wellman

Purpose and Prerequisites

This course is designed to provide masters and Ph.D. students in the Transportation Technology and Policy (TTP) program a solid grounding in the economics of the transportation sector. In addition, the course is an excellent context in which advanced undergraduates can see the principles of economics applied to the analysis of a critical industry in the operation of the global economy. Note that Economics 145 was formerly listed as the graduate offering TTP 215. The instructor will not differentiate between undergraduate and graduate students: everyone will be graded on the same scale and all assignments will be expected of all students. Economics 145 will be more work than the average undergraduate upper-division course. You will also learn more.

Prerequisites for this course are Economics 100, Math 16A, B, C, Statistics 13. These courses (or the consent of the instructor) are essential for this course.

Required Texts: Essays in Transportation Economics and Policy: A Handbook in Honor of John R. Meyer, by Gomez-Ibanez, Tye, and Winston, 1999, The Brookings Institution. This textbook will be heavily used throughout the course. In the syllabus, readings from this book will be denoted “**Essays.**”

Economics at the Wheel: The Costs of Cars and Drivers, by Richard C. Porter, 1999, the Academic Press. This is an extremely useful and intuitive use of basic economic analysis in the context of the costs and benefits of automobile usage. In the syllabus, readings from this book will be denoted “**Porter.**”

Additional “**Readings**” will be on reserve in the Economics dept., SSH room 1111. For the most part, these additional readings are *optional*.

Grading: Student evaluation will be done on the basis of a series of homework exercises, exams, and class participation. Homeworks will collectively account for 20% of the total grade. Students are welcome to work in small groups in completing the homeworks. Homeworks will be distributed during the course lectures and due in class one week after they are distributed. *Late homeworks will not be accepted except in cases of documented illness or family emergencies.* There will be an in-class midterm exam worth 30% of the grade. The final exam, to be given on the scheduled date, will count for 45%. Class participation will count for 5%. Student attendance and participation in all lectures and sections is expected and required.

Final Project: As an *alternative* to taking the final exam, each student may instead choose to complete a final project. This project should be a topic in transportation economics, with the following elements:

- 1) It must involve the collection and analysis of data, including a regression;
- 2) You must write a paper including the motivation for the topic; the sources of the data; and the results of the data analysis;
- 3) The paper should not be less than 10 pages (typed, double-spaced), not counting charts and figures;
- 4) The topic should be discussed with me before the work is done;
- 5) The topic and results should be presented in 10-15 minute talk during the last week;
- 6) The paper will be due on Thursday, March 20 (same day as the final).
- 7) This project must be done individually – students cannot work in groups.

Extra Goodies: Most lectures will make use of multimedia technology. The lecture slides and graphs can be downloaded from the class web site, available through <http://my.ucdavis.edu> or <http://www.econ.ucdavis.edu/faculty/fzfeens/courses.html>. Please visit these websites often.

The course will include some classroom time in the Division of Social Sciences (DSS) Instructional Computing Lab, 233 Social Sciences Building. This will be scheduled during class hours to explain several homework assignments.

Students can use the computers in the DSS lab whenever they are not needed for other classes. A weekly schedule can be found at: <http://dsslabs.ucdavis.edu/>

Students are also encouraged to attend some of the seminars sponsored by the:

Institute for Transportation Studies, Thursdays, 12-1, Engr. Unit II, Rm. 1065

The upcoming seminar is:

Richard Forman, Professor, Harvard University
 “Road Ecology: To Mesh Transportation and Nature”
 Thursday, January 9 from 12:05 - 1:00 p.m.

Other seminars will be announced in class.

Timeline for Lectures

* Denotes the *required* readings in each section

January 7 – Lecture 1, Course Outline

I. The Automobile in Society, Jan. 7 - Jan. 23

January 7, 9 – Lecture 2, *The “Market” for Automobile Driving*

*Porter, Chapters 1-3, pp. 1-35.

January 14 – *Assignment #1 discussed in SSH 223 (Assignment #1 due Jan. 21)*

January 16 – Lecture 3, *The Costs of Driving, Part I: Air Pollution*

*Porter, Chapters 5-6, pp. 55-73, Chapter 15, pp. 173-180.

Essays, Chapter 7, “The Politics of Controlling Air Pollution,” pp. 223-256.

January 21 – Lecture 4, *The Costs of Driving, Part II: Fuel Economy and Auto Safety*

*Porter, Chapter 4, pp. 41-54, Chapters 7-9, pp. 87-118

Essays, Chapter 8, “Fuel Economy and Auto Safety Regulation: Is the Cure Worse than the Disease?” by Lave and Lave, pp. 257-290.

Essays, Chapter 9, “Technology-Forcing Public Policies and the Automobile,” by Leone, pp. 291-324.

Assignment #2 distributed on January 21, due on Jan. 28

January 23 – Lecture 5, *The Costs of Driving, Part III: Congestion, Suburbanization and other Horrors of Modern Live*

*Porter, Chapter 14 and Appendix, pp. 155-172.

Essays, Chapter 12, “Transportation and Land Use,” by Pickrell, pp. 403-436.

January 28 – *Assignment #3 discussed in SSH 223 (Assignment #3 due Feb. 4)*

II. The Automobile Industry: A Quick Look at the Guys Who Make the Cars, and Emerging Markets, Jan. 30 – Feb. 4

January 30 – Lecture 6, *A Look at the U.S. and Global Auto Industry*

Readings, “The Next Automotive Revolution,” by Nash.

February 4 – Lecture 7, *China’s Entry to the WTO*

*Readings, “From Import Substitution to WTO Accession: Government Intervention in the Chinese Automobile Market” Robert Feenstra, Dan Sperling, Lee Branstetter, Eric Harwit, Wen Hai, July 5, 2001

***** MIDTERM EXAM, Thursday, Feb. 6 *****

III. Deregulation in the Airline Industry

February 11 – *Lecture 8*

Readings, “The Evolution of U.S. Airline Competition,” by Borenstein.

Readings, “The Changing Airline Industry,” by Kaplan.

IV. Techniques of Transportation Analysis, Feb. 13 - March 6

February 13, 18 – *Lecture 10 and 11, The Demand for Transportation*

*Essays, Chapter 2, “The Demand for Transportation: Models and Applications,” by Kenneth A. Small and Clifford Winston, pp. 11-56.

Readings, “Concepts of Price Elasticities of Transport Demand and Recent Empirical Estimates: An Interpretative Survey,” by Oum, Waters, and Yong.

Readings, “A Review of New Demand Elasticities with Special Reference to Short and Long-Run Effects of Price Changes,” by Goodwin.

Assignment #4 distributed on February 13, due on Feb. 20

February 20 – *Assignment #5 discussed in SSH 223 (Assignment #5 due Feb.27)*

February 25, 27 – *Lecture 12 and 13, Transportation Costs*

*Essays, Chapter 3, “Learning about Transport Costs,” by Ron Braeutigam, pp. 57-98.

Assignment #6 distributed on February 27, due on March 6

March 4, 6 – *Lecture 14 and 15, Pricing Transportation Services*

*Essays, Chapter 4, “Pricing” by Jose A. Gomez-Ibanez, pp. 99-136.

March 11 (if time permits) – *Lecture 16, Highway Congestion, Revisited*

*Essays, Chapter 6, “Congestion,” Herbert Mohring, pp. 181-222.

Essays, Chapter 10, “Determinants of Motorization and Road Provision,” by Ingram and Liu, pp. 325-358.

Readings, “The Economic Benefits of the Channel Tunnel,” by Kay, Manning, and Szymanski.

Readings, “Optimal Peak-Load Pricing, Investment, and Service Levels on Urban Expressways,” by Keeler and Small.

Class Presentations, March 11 – 13.

*****FINAL EXAM: Thursday, March 20, 4:00 – 6:00 p.m.*****