

---

# Economics 235

## Telecommunications Economics and Public Policy

---

Dr. David Loomis  
Spring 2009

TR 11 a.m. -12:15 p.m.  
STV 434

Office: STV 439B  
Office Hours: TR 10-11 am; 2-3 pm and by appointment  
Phone: 438-7979  
E-mail: dloomis@ilstu.edu

Course Prerequisites: ECO 101/105

---

### REQUIRED RESOURCES: \*

**Jonathan E. Nuechterlein and Philip J. Weiser, *Digital Crossroads: American Telecommunications Policy in the Internet Age*, Cambridge, MA: MIT Press, 2005.**

*Papers referenced in the syllabus will be on e-reserves at the Milner Library website. To access the articles, go to [www.mlb.ilstu.edu](http://www.mlb.ilstu.edu), Reserve Readings, Enter On-line Catalog, Course Reserves, and choose ECO 235.*

A class web site will be maintained for the course. This web site can be found at <http://www.econ.ilstu.edu/dloomis/235web/235home.htm>. You may find it more convenient to go to the Department of Economics Home Page at <http://www.econ.ilstu.edu/>, follow the link for Course Web Pages and find ECO 235 under my name. At the class web site, you will find the following:

- A current copy of this syllabus,
- Class Announcements under "What's New",
- Lecture Notes,
- Problem Sets,
- Tutorials, and
- Links to Useful web sites.

---

### COURSE OBJECTIVES:

This course covers the economic and public policy issues related to the telecommunications industry from a historical, present and future perspective. Students will learn the economic, legal and regulatory history of the industry to better understand the current issues confronting the telecommunications marketplace. Without a proper

---

\*Any student needing to arrange a reasonable accommodation for a documented disability should contact Disability Concerns at 350 Fell Hall, 438-5853 (voice), 438-8620 (TDD).

understanding of the past, the analysis of current issues facing the industry is meaningless. Much of the industry's structure, conduct and performance is related to the historical context of its economic and regulatory past.

A proper economic framework will be developed to allow students to analyze the complex public policy issues that face the telecommunications industry. In addition, students will gain a better understanding of the managerial decision-making that takes place in the industry. Although the course's focus is on the telecommunications industry, much of the economic analysis is applicable to other industries as well.

Students will also examine the future issues that will confront this rapidly changing industry. Using economic models as a foundation, students will analyze complicated real-world situations. The course will have an emphasis on actual case studies.

---

## **COURSE REQUIREMENTS**

There will be 3 exams and an optional comprehensive final. *No make-up exams will be given unless arrangements have been made prior to the exam and approved by the instructor.* Problem sets and quizzes will be given throughout the semester, usually one per week. Each problem set/quiz will be graded out of 100 points. The average of all problem sets/quizzes will figure into your final grade. Writing Assignments will be assigned throughout the semester.

The final grade will be based on the following point scheme:

Exam #1	100 points
Exam # 2	100 points
Exam # 3	100 points
Homework	100 points
Class Participation	50 points
Writing Assignments	50 points
<b>TOTAL</b>	<b>500 points</b>
<u>Final (optional)</u>	<u>200 points</u>
<b>TOTAL</b>	<b>700 points</b>

The following point scale will be used to evaluate your performance:

<b>Grade</b>	<b>Total Points (without final)</b>	<b>Total Points (with final)</b>
A	450 or above	630 or more
B	400 or above	560 or more
C	350 or above	490 or more
D	300 or above	420 or more
F	less than 300	less than 420

Class Participation grades will be determined at the end of the semester based on the following criteria (I reserve the right to assign points in between these categories):

Points	Characteristics
50	This student always attends class, is always prepared for class and regularly makes positive major contributions to class discussion
40	This student always attends class, is mostly prepared for class and frequently makes positive major contributions to class discussion
35	This student regularly attends class, is sometimes prepared for class and occasionally makes positive major contributions to class discussion
25	This student mostly attends class, is sometimes prepared for class and occasionally makes some contribution to class discussion
10	This student misses class frequently, is sometimes prepared for class and occasionally makes some contribution to class discussion
0	This student misses class frequently, is rarely prepared for class and rarely makes a contribution to class discussion

## KEYS TO SUCCESS

This course has a large volume of reading. Some of the reading is technical, focused on economic theory and some of the reading is narrative, focused on historical events. ***It is imperative that you read the assigned material in both areas.*** Because part of the class is discussion oriented, you will not maximize your classroom learning if you have not read the material in advance. In addition, ***participating in classroom discussion will help you clarify your own thinking.*** As you listen to others' economic reasoning and express your own ideas, true learning takes place. The goal of this course is not to memorize a set of facts the night before the exam but to develop economic reasoning in the area of telecommunications. This cannot be done by cramming the night before the exam!! Finally, ***do the problem set independently so that you know not only the correct answer but also how to arrive at the correct answer.*** Many exam questions will be similar to problem set questions; so view problem sets as practice exams.

If, after reading the assigned material, participating in class discussion and working independently on problem sets, you are not achieving the level of success that you expect of yourself, please come to see me regularly during office hours. My goal as your professor is to see you succeed. If you are doing your best to learn, I will do my best to help you learn.

<b>Schedule</b>		
<b>Date</b>	<b>Topic</b>	<b>Problem Set</b>
January 13	Review of Economic Theory	
January 15	Review of Economic Theory	
January 20	Review of Economic Theory	#1
January 22	What is Telecom?	
January 27	What is Telecom?	#2
January 29	Development of Telecom	#3
February 3	Development of Telecom	
February 5	Wireline Competition	#4
February 10	Wireline Competition	
February 12	<b>Exam #1</b>	
February 17	Internet Technology	
February 19	Internet Technology	
February 24	Voice over IP	#5
February 26	Voice over IP	
March 3	Voice over IP	#6
March 5	Economics of Information	
March 10-12	<b>Spring Break</b>	
March 17	Economics of Information	
March 19	Wireless Communication	#7
March 24	Wireless Communication	
March 26	Wireless Communication	#8
March 31	Wireless Communication	
April 2	<b>Exam #2</b>	
April 7	Intercarrier Compensation	
April 9	Intercarrier Compensation	
April 14	Universal Service	#9
April 16	Universal Service	
April 21	Cable TV Industry	#10
April 23	Cable TV Industry	
April 28	The Future/Review	
April 30	<b>Exam #3</b>	
May 5	<b>Final – 10 am – Tuesday</b>	

## COURSE OUTLINE (Readings with a \* are required)

### I. Review of Economic Theory

\**Digital Crossroads*, Chapter 1.

\* Brightwell, David A., *Economics Primer*

Spencer, Milton H., "Perfect Competition," Chapter 8, *Contemporary Microeconomics*, New York: Worth Publishers, 1990.

Spencer, Milton H., "Monopoly Behavior," Chapter 9, *Contemporary Microeconomics*, New York: Worth Publishers, 1990.

### II. What is Telecommunications? - Market Structure/Pricing/Regulation

\**Digital Crossroads*, Chapter 2.

\* Loomis, David G., "The Telecommunications Industry" in Hossein Bidgoli (ed.) *The Handbook of Computer Networks*, Wiley, 2008.

\* Sappington, David E. M., and Dennis Weisman, Today's Telecommunications Industry (2 parts), *Designing Incentive Regulation for the Telecommunications Industry*, Cambridge: MIT Press, 1996, Chapter 2.

\* Shapiro, Carl and Hal R. Varian, "Networks and Positive Feedback," *Information Rules: A Strategic Guide to the Network Economy*, Boston: Harvard Business School Press. 1999, Chapter 7, "Networks and Positive Feedback."

### III. Development of the Telecommunications Industry / Initial Competition / Divestiture

\* Moore, Alma, "Development of the Telecommunications Industry," mimeo, 1998, available on-line at class website

\* Hausman, Tardiff, and A. Belinfante, "Effects of the Breakup of AT&T on Telephone Penetration in the United States," *American Economic Review*, May 1993, pp. 178-184.

\* Taylor, William E., & Lester D. Taylor, "Postdivestiture Long-Distance Competition in the United States," *American Economic Review*, May 1993, pp. 185-190.

Crandall, Robert W., & Leonard Waverman, "Telephone Industry in the United States and Canada," *Talk is Cheap*, Washington: Brookings Institute, Chapter 1.

Shoosan, Harry M., "Bell breakup," *Disconnecting Bell: The Impact of the AT&T Divestiture*, Chapter 2.

Cornell, Nina, "The Use of Economics in the Public Policy Debate in Telecommunications," *The Quarterly Review of Economics and Finance*, Vol. 36 Special Issue 1996, pp. 73-84

Brennan, Timothy J., "Is the Theory Behind U.S. v. AT&T applicable today?," *The Antitrust Bulletin*, Fall 1995, pp. 455-482.

### IV. Wireline Competition after the Telecom Act of 1996

- \**Digital Crossroads*, Chapter 3.
- \* Vogelsang, Ingo & Bridger M. Mitchell, "Interconnection and Wholesale Competition (2 parts)," Chapter 6, *Telecommunications Competition: The Last Ten Miles*, Cambridge: MIT Press, 1997.
- \* Vogelsang, Ingo & Bridger M. Mitchell, "The FCC's Local Competition Order," Chapter 8, *Telecommunications Competition: The Last Ten Miles*, Cambridge: MIT Press, 1997.

## EXAM # 1

### V. Internet Technology

- \**Digital Crossroads*, Chapter 4-5.
- \* M&B, "An Introduction to Internet Economics," Lee W. McKnight and Joseph P. Bailey, pp. 3-26.
- \* M&B, "Economic FAQs About the Internet," Jeffrey K. MacKie-Mason and Hal R. Varian, pp. 27-62.
- \* Davis, Jeff, "Internet Economics," mimeo, 1998, available on the class website.

### VI. Voice Over IP

- \**Digital Crossroads*, Chapter 6.

### VII. Economics of Information

- \* Shapiro, Carl and Hal R. Varian, "The Information Economy," Chapter 1, *Information Rules: A Strategic Guide to the Network Economy*, Boston: Harvard Business School Press. 1999.

### VIII. Wireless Communications

- \**Digital Crossroads*, Chapter 7-8.
- \* Stone, Alan, "Wireless Revolution," Chapter 7, *How America Got Online*, Armonk, NY:M.E. Sharpe, 1997.
- McMillan, John, "Selling Spectrum Rights," Journal of Economic Perspectives, Vol. 8 No 3, Summer 1994, pp. 145-162.

## EXAM # 2

### IX. Intercarrier Compensation

- \**Digital Crossroads*, Chapter 9.

### X. Universal Service

- \**Digital Crossroads*, Chapter 10.
- \* Mueller, Milton, "Universal Service: A Concept in Search of a History," Chapter 2, *Universal Service*, Cambridge: MIT Press, 1997.
- \* Mueller, Milton, "Universal Service in the 1990s," Chapter 14, *Universal Service*, Cambridge: MIT Press, 1997.
- \* Mueller, Milton, & Jorge Reia Schement, "Six Myths of Telephone Penetration," Report for Bell Atlantic.

## XI. Cable TV Industry

- \**Digital Crossroads*, Chapter 11.
- \*Gershon, Richard A. "Cable Television Management," *Telecommunications Management*, Lawrence Erlbaum: Mahwah, NJ: 2001.
- \*Doyle, Gillian, "Introduction to Media Economics," *Understanding Media Economics*, Sage: Thousand Oaks, CA, 2002.
- Doyle, Gillian, "Media Economics and Public Policy," *Understanding Media Economics*, Sage: Thousand Oaks, CA, 2002.

## XII. The Future of Telecommunications Policy

- \**Digital Crossroads*, Chapter 13.

EXAM #3

FINAL