

# Resec 397A: Economics of Contemporary Information Technology

## Syllabus

### Instructor

Michael Carr

mdc@econs.umass.edu

[www.people.umass.edu/mdc](http://www.people.umass.edu/mdc)

<https://blogs.umass.edu/mdc>

Thompson 928

Office Hours: 2:00-4:00 M

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- **Description**

As the name suggests, this class will investigate the economic principles associated with the Information Technology (IT) sector. There are several aspects of the IT sector that make the analysis of its industries, firms, markets, and products quite different from that of standard economic analysis. Most importantly, these industries are characterized by high fixed costs but essentially zero marginal cost, there are many markets in which the products are close but not perfect substitutes, and many markets have one or two dominant firms with many small intensely competitive firms. Because of these and other issues, the model of perfect competition taught in most micro classes will only serve as a starting point, from which we will quickly depart. The markets in question will be primarily analyzed using concepts based on imperfect competition, both game theoretic and not.

- **Readings**

All readings marked with a \* will be available on the instructor's website listed at the top of the syllabus. Readings marked with a † should be ordered as soon as possible. The remaining readings are available as e-books through the library, online with the provided link, or you should already own. To find e-books, search for the book on the library's website like you normally would (e.g. by author, by title, etc...). When you find the book, it will give you the availability of the physical copies located in the library as well as a link to the electronic copy. If you want to buy the book, all electronic books are also available in print. Citations for the required articles can be found in the Bibliography.

- **Texts**

1. Any Introductory or Intermediate Microeconomics text
2. Boldrin, Michelle and David K. Levine (2008) *Against Intellectual Monopoly*  
Available at <http://www.dklevine.com/general/intellectual/againstfinal.htm>
3. \*Carr, Michael. *Review of Basic Economic Concepts*
4. \*Carr, Michael. *An Introduction to Game Theory*
5. Low, Linda *Economics of Information Technology and the Media*
6. Varian, Hal (1999). *Information Rules: a Strategic Guide to the Network Economy*
7. † Varian, Hal (2004). *The Economics of Information Technology*

- **Articles**

Complete citations can be found in the bibliography

1. \*Schumpeter, J.A. (1975) “Capitalism, Socialism, and Democracy,” pp. 82-85.
2. \*Dewett, T. and G.R. Jones (2001) “The Role of Information Technology in the Organization: a Review, Model, and Assessment.”
3. \*Varian, Hal (1998) “Versioning”
4. \*David, Paul (1985) “Clio and the Economics of QWERTY”
5. \*Coase, R.H. (1972) “Durability and Monopoly”
6. \*Liebowitz, S.J. and S.E. Margolis (1994) “Network Externality: an Uncommon Tragedy”
7. \*Shapiro, C. “Setting Compatibility Standards: Cooperation or Collusion?”
8. \*Shapiro, C. and H. Varian (1999) “The Art of Standards Wars”

- **Grading**

There will be four short exams, a final exam, five short written assignments, and six short in class quizzes of which the lowest grade will be dropped. The grade break down is as follows:

Exams	40%
Final Exam	20%
5 Written Assignments	30%
Attendance	10%

- **Assignments**

The written assignments will be short, 1-2 pages. For each assignment, your task is to identify a firm, market, industry, or product that has the properties associated with the model we are discussing at that time, or has made use of the issue at hand (this becomes relevant towards the end of the semester). There are 9 models that you can choose from, **you must discuss five**. Your short discussion should be posted to the class blog. There is a link to the blog on the instructor’s website. If you want it to be posted anonymously, you may email it to me and I will post it for you. You are each expected to at least skim others’ responses so that they can be discussed in class. At the end of each model, we will take time in class to discuss these responses. Because we meet once a week, this discussion will occur at the beginning of the following class. **In the weeks that you do not post, you should be prepared to present someone else’s post in class.** This presentation should include a brief summary of what the person said, and your opinion regarding the applicability of the model to the situation in question. You only need to prepare one in the week that you do not post. **Responses are due on the Saturday before the next class.** For example, if we discuss a model on Monday, March 23, the response for that class’s material would be due on Saturday, March 28. They are due by midnight that day, and must be handed in on time or they will not be accepted. **Remember that you must do 5 of them all on different models. You cannot push them all off until the end of the semester.** They will be graded on a credit/no-credit basis. If one of your responses is not acceptable, I will give credit for turning it in, but I will not give credit for the next one unless you do a better job.

- **Quizzes**

The quizzes are intended to help you study, and to make sure you are keeping up with the reading. They will not be hard, but you will have to have done the reading in order to answer the questions. Although this may not always work out, my intention is to give a quiz prior to me discussing the material, but after you were supposed to have read it. They will test only a basic level of understanding. I will not announce the quizzes ahead of time.

- **Timeline**

The dates listed refer to the day the material will be covered, and can be found after the bibliography. The associated readings are listed under each topic. We will spend the first three or so weeks of class (re)learning the basic economic principles needed for the class. The last 12 weeks will be spent applying these principles in different contexts.

## References

- Autor, David, "Wiring The Labor Market," Journal of Economic Perspectives, Winter 2001, 15 (1), 25–40.
- Boldrine, Michele and David K. Levine, Against Intellectual Monopoly, Cambridge: Cambridge University Press, forthcoming.
- Coase, R. H., "Durability and Monopoly," Journal of Law and Economics, April 1972, 15 (1), 143–149.
- David, Paul A., "Clio and the Economics of QWERTY," American Economic Review, May 1985, 75 (2), 332–337.
- Dewett, Todd and Gareth R. Jones, "The Role of Information Technology in the Organization: a Review, Model, and Assessment," Journal of Management, 2001, 27 (3), 313–346.
- Liebowitz, Stanley J. and Stephen E. Margolis, "Network Externality: An Uncommon Tragedy," Journal of Economic Perspectives, Spring 1994, 8 (2).
- Schumpeter, Joseph A., Capitalism, Socialism, and Democracy, New York: Harper, 1975.
- Shapiro, Carl and Hal R. Varian, "The Art of Standards Wars," California Management Review, Winter 1999, 41 (2), 8–32.
- Varian, Hal R., "Versioning," Harvard Business Review, 1998.

Date	Topic	Readings	Response Due
1/26	Review of Microeconomics	Intro and/or Intermediate Micro text Micro Review Handout Low (chp. 2)	
2/2	Review of Micro. and Intro. to Game Theory	Intro and/or Intermediate Micro text Micro Review handout	
2/9	Technology and Market Structure	EOITC (chp. 2) Low (chp. 3) (Schumpeter 1975) (Dewett and Jones 2001)	2/21
2/16	No Class		
2/23	<b>Exam 1 Covering 1/26, 2/2, and 2/9</b> Intellectual Property	Information Rules (chp. 4 & 10) Low (chp. 8-9)	2/28
3/2	Intellectual Property (cont.)	Low (chp. 8-9) (Boldrine and Levine forthcoming) GNU Project website	3/7
3/9	Snow Day		
3/16	No Class		
3/23	<b>Exam 2 Covering 2/23, 3/2, and 3/9</b> Differentiation of Products and Prices	EOITC (chp. 5) (Varian 1998)	3/28
3/30	Switching Costs and Lock-in	EOITC (chp. 6-7) (David 1985) (Coase 1972)	4/4
4/6	Supply Side Econ. of Scale	EOITC (chp. 6-7) (David 1985) (Coase 1972)	4/11
4/13	<b>Exam 3 Covering 3/23, 3/30, and 4/6</b> Demand-side Economies of Scale and Standards	EOITC (chp. 8-9) (Liebowitz and Margolis 1994) (Shapiro and Varian 1999)	4/18
4/20	No Class		
4/21	IT and Media Markets	Low (chp. 4)	4/25
4/27	Issues in Media and Information Economics	Low (chp. 11)	5/2
5/4	IT, Labour, and Employment	Low (chp. 6) (Autor 2001)	5/9
5/11	<b>Exam 4 Covering 4/13, 4/21, 4/27, and 5/4</b>		