

THE ECONOMICS OF NETWORK INDUSTRIES  
COURSE SYLLABUS:

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JUNE 20–21, 2002

(Revised, January 1, 2003, filename=sienasy10206.tex)

**Overview:** This handout sketches the plan for an 10–hour mini-course designed for graduate students and faculty (advanced Economics undergraduate students with proper training may also attend).

**Background:** Intermediate Microeconomics. It will be helpful if students will be familiar with basic concepts in game theory (in particular, the concepts such as: normal-form game, outcome of a game, and the Nash equilibrium).

**Textbook:** Shy, Oz. 2001. *The Economics of Network Industries*. Cambridge University Press.

**Exams and Problem Sets:** Recommended practice exercises for each topic are marked as Ex.# below. These problems-sets as well as solutions will be distributed as handouts during the course.

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INTRODUCTION [Ch.1]

(a) Overview Network Industries (compatibility and standardization; externalities, switching costs and lock-in, economies of scale). (b) Welfare and government intervention

PART II: THE HARDWARE INDUSTRY

(a) The Network Externalities Approach (duopoly case) [Ch.2: pp.27–35, Ex.1–5]

(b) The Components Approach [Ch.2: pp.36–42, Ex.6]

(c) New Technology Adoption (static approach) [Ch.4: 80–83, Ex.1]

(d) Empirical Findings [Ch.2: 43–46]

PART III: THE SOFTWARE INDUSTRY

(a) Software Variety Under Hardware Competition [Ch.3: pp.57–61 Ex.3]

(b) Software Piracy [Ch.3: 65–71, Ex.3]

(c) Empirical Findings [Ch.3: 73–76]

PART IV: TELECOMMUNICATION

(a) The Demand for Telecommunication services [Ch.5: 102–109, Ex.1,2]

(b) A Calculus Analysis [Ch.5: 109–117, Ex.3]

(c) International Phone Calls Settlement Rates [Ch.5: 125–130, Ex.5]

PART V: BROADCASTING AND MARKETS FOR INFORMATION

- (a) Scheduling Competition [Ch.6: 135–144, Ex.1–3]
- (b) Program-type Competition [Ch.6: 145–147, Ex.4]
- (c) Cable TV (bundling) [Ch.6: 147–149, Ex.5]
- (d) The Economics of Libraries [Ch.7: 170–175, Ex.2]
- (e) The Internet [Ch.7: 175–182]

PART VI: SWITCHING COSTS AND NETWORK STRUCTURES

- (a) Switching Costs [Ch.8: 188–193, Ex.1]
- (b) Network Structures in the Airline Industry [Ch.9: 216–217, Ex.1]
- (c) Code-sharing Agreements in the Airline Industry [Ch.9: 224–229, Ex.3]