



# UNIVERSITÀ DEGLI STUDI DI PALERMO

<b>DEPARTMENT</b>	Scienze Economiche, Aziendali e Statistiche
<b>ACADEMIC YEAR</b>	2019/2020
<b>SECOND CYCLE (7TH LEVEL) COURSE</b>	BUSINESS ECONOMIC SCIENCES
<b>SUBJECT</b>	ECONOMICS OF MARKET
<b>TYPE OF EDUCATIONAL ACTIVITY</b>	B
<b>AMBIT</b>	50586-Economico
<b>CODE</b>	14327
<b>SCIENTIFIC SECTOR(S)</b>	SECS-P/06
<b>HEAD PROFESSOR(S)</b>	TESORIERE ANTONIO Professore Associato Univ. di PALERMO
<b>OTHER PROFESSOR(S)</b>	
<b>CREDITS</b>	8
<b>INDIVIDUAL STUDY (Hrs)</b>	146
<b>COURSE ACTIVITY (Hrs)</b>	54
<b>PROPAEDEUTICAL SUBJECTS</b>	
<b>MUTUALIZATION</b>	
<b>YEAR</b>	2
<b>TERM (SEMESTER)</b>	2° semester
<b>ATTENDANCE</b>	Not mandatory
<b>EVALUATION</b>	Out of 30
<b>TEACHER OFFICE HOURS</b>	<b>TESORIERE ANTONIO</b> Friday 9:00 11:00 teams

<b>PREREQUISITES</b>	I assume the student knows the basic elements of the standard undergraduate courses in Micro and Mathematics. For instance, I assume s/he is able to find the demand function or the monopolist's optimal action, and that s/he is able to solve an unconstrained maximization problem in R. I do not assume s/he knows Game Theory. Nonetheless, if the student has already taken a course in Game Theory then s/he may go over the Nash Equilibrium in pure strategies for games in normal form.
<b>LEARNING OUTCOMES</b>	I want the student to know all the topics in the syllabus, and to be able to apply the models underlying each topic to what both firms and antitrust agencies do in industries with network effects. I want the student to be able to use the comparative statics of these models as well as the other techniques s/he has studied during my course to make predictions, and to evaluate both the private and public implications of these practices. I want the student to be able to describe both the fundamental economic features of the phenomenon s/he is looking at and the model s/he uses to study that phenomenon.
<b>ASSESSMENT METHODS</b>	<p>To judge the student I will make an oral examination. I will ask no less than three general questions, that is questions about topics or subtopics of the syllabus. For instance: tying independent goods; exclusivity contracts, and so on. During the course we will associate each point with one or more models. I want the student to pick a model, to explain what the model is about, to discuss the assumptions, and to get the results. I do not require the student to write down the entire model or to go through computations, but I want the student to explain rigorously how to obtain the results, and to interpret them. For instance, if the student wants to talk about equilibria with fulfilled expectations, s/he needs not find the firm's demand function, then the conditions for an interior Nash Equilibrium, and finally the ones for the expectations to be fulfilled. But s/he has to tell one condition from another, explain how to obtain them, and then use them to show that the equilibrium actually exists.</p> <p>I will also ask specific questions, that is questions about the fundamental points underlying the results. For instance: why does a monopolist platform that asks transaction fees set the price structure so that it maximizes demand? Why by tying two independent goods does a firm get a lower marginal profit from raising the price of the competitive good?</p> <p>If the student discusses even only one general topic in a satisfactory way, s/he will get from 18 to 22. As s/he discusses more topics s/he gets a larger mark. If the student cannot explain a single point about every general topic, then she will not pass the exam.</p>
<b>EDUCATIONAL OBJECTIVES</b>	The course is an introduction to network effects and business strategies that are relevant in the presence of network effects. It deals with general topics, such as the equilibrium with fulfilled expectations and the equilibrium structure and the comparative statics of the industry, as well as with applications, such as tying, exclusive dealing contracts, and two-sided markets.
<b>TEACHING METHODS</b>	I will give 24 classes and two exercise sessions, of two hours each.
<b>SUGGESTED BIBLIOGRAPHY</b>	<p>Parte 1. Katz, M. L., Shapiro, C., System Competition and Network Effects, The Journal of Economic Perspectives, 8, 1994, pp. 93-115.</p> <p>Parte 2. Katz, M. L., Shapiro, C., Network Externalities, Competition, and Compatibility, American Economic Review, 3, 1985, pp. 424-440. Farrell &amp; Saloner, Standardization, Compatibility and Innovation. RAND Journal of Economics, 1985, pp. 70-83 Katz, M. L., Shapiro, C., Technology adoption in the presence of network externalities. Journal of political economy, 1986, 94.4: 822-841. Economides, N., Himmelberg, C., Critical Mass and Network Size with Application to the US FAX Market, 1995, <a href="http://papers.ssrn.com/sol3/papers.cfm?abstractid=6858">http://papers.ssrn.com/sol3/papers.cfm?abstractid=6858</a></p> <p>Parte 3. Armstrong, M., Competition in Two-sided Markets, RAND Journal of Economics, 37, 2006, pp. 668-691. Rochet, J. C., Tirole, J., Platform Competition in Two-sided Markets, Journal of the European Economic Association, June 2003, pp. 990-1029. Caillaud, B., Jullien, B., Competing Cybermediaries, European Economic Review, 2009.</p> <p>Parte 4. Whinston, M., Tying, Foreclosure, and Exclusion, American Economic Review, 4, 1990, pp. 837-859</p>

	<p>Carlton, D., Waldman, M., The strategic Use of Tying to Preserve and Create Market Power in Evolving Industries, RAND Journal of Economics, 2, 2002, pp. 194-220</p> <p>Parte 5. Whinston, M., Lectures on Antitrust Economics, 2006, The MIT press., capitolo. 4, pp. 133-139 e 144-151. Aghion, P. Bolton, P. , Contracts as a barrier to entry, 1987, American Economic Review, 77, pp. 388-401.</p> <p>Parte 6. Gilbert, R. J., Katz, M. L., An Economist's Guide to U.S. vs Microsoft, The Journal of Economic Perspectives, 2, 2001, pp. 25-44. Whinston, M., Exclusivity and Tying in U.S: v. Microsoft: What We Know, and Don't Know, Journal of Economic Perspectives, 2, 2001, pp. 63-80. Choi, J. P., &amp; Jeon, D. S. (2016). A leverage theory of tying in two-sided markets. Etro, F., &amp; Caffarra, C. (2017). On the economics of the Android case. European Competition Journal, 13(2-3), 282-313. Edelman, B. (2015). Does Google leverage market power through tying and bundling?. Journal of Competition Law &amp; Economics, 11(2), 365-400.</p>
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### SYLLABUS

Hrs	Frontal teaching
6	1. Motivation. The syllabus. Introduction to network effects. Empirical relevance of network effects. Tying. Exclusive dealing. Two sided markets. Cases. Review of games and markets.
11	2. Equilibrium with fulfilled expectations. Compatibility and comparative statics. Incompatibility and asymmetries. Choice of the compatibility regime. Standardization. Pricing and technology adoption.
2	2. Network effects and critical mass. Network externalities and social inefficiencies.
2	3. Indirect effects and two-sided markets. Introduction and overview of business strategies.
6	3. Monopolistic platform that charges access fees; that charges transaction fees; that charges both types of fees.
2	3. Competing platforms that charge access fees (no multihoming case).
5	4. Tying. Introduction. Tying independent goods. Tying complementary goods.
2	4. Tying in evolving industries.
8	5. Exclusive dealing contracts and efficiency. Partial contracts. Partial contracts when buyers compete. Penalty clauses both with complete and with incomplete information.
4	6. Applications to Microsoft and Android