Syllabus

Course Description

Course Title	Advanced Economics for Digital Business
Course Code	76422
Course Title Additional	
Scientific-Disciplinary Sector	ECON-02/A
Language	English
Degree Course	Bachelor in Informatics and Management of Digital Business
Other Degree Courses (Loaned)	
Lecturers	Prof. Laura Grigolon, Laura.Grigolon@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/54137
Teaching Assistant	
Semester	First semester
Course Year/s	3
CP	6
Teaching Hours	30
Lab Hours	12
Individual Study Hours	108
Planned Office Hours	18
Contents Summary	- Introduction to Applied Research - Identifying Causal Effects - In-depth Discuss of Empirical Methods for Causal Analysis - Introduction to Industrial Organization - Advanced topics in Industrial Organization II: - From firms to platforms, monopoly platform and platform competition, platforms as regulators of quality, product ratings and review systems, market tipping, platform growth, case studies.
Course Topics	Foundations of industrial organization: how to measure market power and market structure, what determines concentration, prices

	and markups in real industries, and why firms deviate from the competitive benchmark; costs, monopoly and the welfare effects of market power. Strategic competition among firms: quantity and price competition in oligopoly (Cournot and Bertrand), competition with differentiated products, the conditions under which firms sustain collusion, and vertical relationships along the supply chain. The empirical toolkit of modern industrial organization: a refresher of the necessary statistics and econometrics, the problem of endogeneity and the use of instrumental variables, and how economists estimate demand for differentiated products using discrete-choice models (logit, nested logit and random-coefficient models). Competition and public policy: identifying whether firms compete or collude, detecting cartels, and simulating the effects of mergers on prices and consumer welfare. Competition in the digital economy: how markets with network effects and two-sided platforms differ from traditional ones, and what this implies for competition policy.
Keywords	Market power, market structure, concentration, markups, oligopoly, Cournot and Bertrand competition, product differentiation, collusion, cartels, demand estimation, discrete choice, logit models, instrumental variables, merger analysis, merger simulation, vertical relations, competition policy, network goods, network effects, two-sided platforms, digital economy.
Recommended Prerequisites	Economics of Digital Markets
Propaedeutic Courses	
Teaching Format	Lectures, discussions, and small group projects and presentations.
Mandatory Attendance	Highly Recommended, but not required
Specific Educational Objectives and Learning Outcomes	The course belongs to the type "attività formativa affine o integrativa". This course has two objectives. The first goal is to give the students practical skills in analyzing data to answer questions about the causal impact of different decisions or policies on

	outcomes for individuals and firms. The second objective of the course is to analyze the digital economy and the markets in which digital businesses work. We cover basics in industrial organization, platforms, network effects, pricing and platform competition. Work with data and case studies concludes the course. Knowledge and understanding: • D1.17 – Learn about macroeconomic and global developments to understand how the macroeconomy works. Understanding methods used by digital businesses in their business strategy. • D1.18 - Understand the interdisciplinary approach to IT projects that takes into account technical foundations, business needs, social and dynamic aspects and the regulatory framework. Applying knowledge and understanding: • D2.3 - Ability to analyze digital business problems and to develop proposals for solutions with the help of IT tools. • D2.4 - Ability to analyze procedures and operational processes. • D2.13 - Ability to apply additional knowledge in the subjects of Digital Marketing. Making judgments • D3.1 - Ability to interpret data useful for forming independent judgments on IT and economic aspects of information systems. • D3.3 - Ability to compare and evaluate different IT solutions based on their technical characteristics and key business figures. • D3.4 - Ability to assess fundamental economic and business facts on the basis of numerical data. Communication skills • D4.1 - Be able to use the three languages English, Italian and German and, in particular in English, be able to use appropriate technical terminology and communication style. • D4.2 - Ability to use modern means of communication also for remote interactions. • D4.3 - Ability to negotiate with people with different professional experiences the definition and requirements of corporate information systems. Learning skills • D5.2 - Learning ability to carry out strategic and IT project activities. • D5.3 - Ability to follow rapid technological developments and to

	learn about innovative aspects of the latest generation of information technology and systems.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	An obligatory written final exam. For the final exam neither textbooks, nor other teaching materials, nor any electronic devices are allowed in the examination room. Dictionaries without notes and simple calculators are permitted. No special exam for non-attendees. In addition, students may give a voluntary 7-minute presentation after the teaching sessions have concluded. If the presentation is given and is of good quality, it counts for 20% of the final grade and the written exam counts for the remaining 80%; otherwise the written exam determines 100% of the grade. The presentation can only improve a student's grade.
Evaluation Criteria	The grade in the course is determined by the written final exam. If a student also gives the optional presentation and it is of good quality, the presentation counts for 20% and the written exam for 80% of the final grade; otherwise the written exam determines the whole grade. The in-class slides of the instructor are the primary basis for the material covered in the exam and will be made available to the students online; they are complemented by the textbooks "Quantitative Techniques for Competition and Antitrust Analysis" by Peter Davis and Eliana Garcés and "Industrial Organization: Markets and Strategies" by Paul Belleflamme and Martin Peitz, available via the university library.
Required Readings	Quantitative Techniques for Competition and Antitrust Analysis, Peter Davis and Eliana Garcés, Princeton University Press, Princeton 2010. (accessible via www.unibz.it/library). In-class slides of the instructor. Subject Librarian: David Gebhardi, David.Gebhardi@unibz.it
Supplementary Readings	The Economics of Platforms: Concepts and Strategy, Paul Belleflamme and Martin Peitz, Digital edition, Cambridge University Press, Cambridge 2021 (accessible via www.unibz.it/library).

	Industrial Organization: Contemporary Theory and Empirical Applications, Lynne Pepall, Dan Richards and George Norman, 5th edition, Wiley, 2014. Introduction to Econometrics, James Stock and Mark Watson, Global edition, Pearson. Intermediate Microeconomics: A Modern Approach, Hal Varian, 8th edition, W.W. Norton, New York, 2009. Strategy, Joel Watson, 3rd edition, W.W. Norton, New York, 2013.
Further Information	
Sustainable Development Goals (SDGs)	Quality education