

# Syllabus

## *Course Description*

<b>Course Title</b>	Methods and applications for Empirical Economics
<b>Course Code</b>	29128
<b>Course Title Additional</b>	
<b>Scientific-Disciplinary Sector</b>	NN
<b>Language</b>	English
<b>Degree Course</b>	PhD Programme in Economics and Finance
<b>Other Degree Courses (Loaned)</b>	
<b>Lecturers</b>	
<b>Teaching Assistant</b>	
<b>Semester</b>	First semester
<b>Course Year/s</b>	2026/27
<b>CP</b>	2
<b>Teaching Hours</b>	12
<b>Lab Hours</b>	0
<b>Individual Study Hours</b>	0
<b>Planned Office Hours</b>	0
<b>Contents Summary</b>	<p>The course introduces students to empirical analysis using observational data. After presenting the foundations of this type of analysis and discussing the main sources of microdata available for research, the course will address the problem of endogeneity and its main causes.</p> <p>The course adopts a “laboratory-based” approach. Lectures aimed at introducing the theoretical models and the main methodological issues will be followed by tutorials. During the tutorials, students will deepen their knowledge of econometric software and use real-world data for a range of applications.</p> <p>Possible applications include: estimating firms’ productivity and market power; empirical analysis using international trade data;</p>

	the use of patent data; and empirical analysis of market imperfections.
<b>Course Topics</b>	Module 1: Firms in international trade (heterogeneous firms, export decisions, trade policies, productivity, quality). Module 2: Firms, hierarchies, and knowledge management.
<b>Keywords</b>	
<b>Recommended Prerequisites</b>	
<b>Propaedeutic Courses</b>	
<b>Teaching Format</b>	<ul style="list-style-type: none"> <li>• Frontal lectures</li> <li>• In class presentations by students</li> </ul>
<b>Mandatory Attendance</b>	Required
<b>Specific Educational Objectives and Learning Outcomes</b>	<p>PhD programme:</p> <p>The courses aim to train researchers with strong quantitative and theoretical skills, capable of analyzing economic and financial phenomena.</p> <p>Candidates' dissertations are expected to adhere to the highest standards of scientific rigor and to demonstrate innovative features that make them suitable for publication in leading international peer-reviewed journals. The programme therefore seeks to contribute to the international scientific debate in economics and finance. To this end, candidates will be encouraged to employ state-of-the-art methodologies and to adopt a multidisciplinary approach.</p> <p>The advanced training provided by the programme, together with the research methods required to complete the dissertation, prepares candidates both for an academic career and for high-level professional positions involving policy analysis and policymaking.</p> <p>Course 29128:</p> <ul style="list-style-type: none"> <li>• Acquire the skills to interpret empirical findings and relate them to relevant theoretical frameworks.</li> <li>• Gain methodological tools to refine and strengthen their Ph.D. research proposals in line with the approaches covered in the course.</li> </ul>
<b>Specific Educational Objectives and Learning</b>	<ul style="list-style-type: none"> <li>• Develop a solid understanding of modern methods for counterfactual analysis using observational data.</li> </ul>

<b>Outcomes (additional info.)</b>	<ul style="list-style-type: none"> <li>Critically assess different areas of application of these techniques.</li> </ul>
<b>Assessment</b>	<p>Individual presentation in which each student will have the opportunity to deepen the analysis of their Ph.D. research topic. The presentation should clearly define a specific research question, identify potential data sources, outline the appropriate empirical methodology, and discuss the main estimation challenges anticipated in the project.</p>
<b>Evaluation Criteria</b>	<p>Student evaluations will be based on several criteria:</p> <ul style="list-style-type: none"> <li>The clarity with which they explain the research question (25%).</li> <li>The appropriateness of the empirical methods proposed to address it (25%).</li> <li>The originality and creativity in identifying potential data sources (25%).</li> <li>Their critical ability to anticipate potential estimation challenges and suggest solutions for addressing them (25%).</li> </ul>
<b>Required Readings</b>	<ul style="list-style-type: none"> <li>Quoc Thai L. and Tomasi, C. (2023) "Trade liberalization and firms' performance in Vietnam: the role of local business environment", <i>Regional Studies</i>, 57(9), 1681-1713.</li> <li>Mauro Caselli, Jiuli Huang, Chiara Tomasi, Min Zhu (2024) "Anti-dumping and Product Quality", working paper.</li> <li>Jiang, W. 2017. "Have Instrumental Variables Brought Us Closer to the Truth." <i>Review of Corporate Finance Studies</i> 6, no. 2: 127–140.</li> <li>Oster, E. 2019. "Unobservable Selection and Coefficient Stability: Theory and Evidence." <i>Journal of Business &amp; Economic Statistics</i> 37, no. 2: 187–204.</li> <li>Garicano, L. 2000. "Hierarchies and the Organization of Knowledge in Production." <i>Journal of Political Economy</i> 108: 874–904.</li> <li>Pieri, F., Vatiello, M. 2024. "Firm hierarchy and the market for knowledge", <i>Journal of Economics &amp; Management Strategy</i>, DOI: <a href="https://doi.org/10.1111/jems.12617">https://doi.org/10.1111/jems.12617</a></li> </ul>
<b>Supplementary Readings</b>	
<b>Further Information</b>	
<b>Sustainable Development Goals (SDGs)</b>	