

## Call for applications for PhD programmes

**Positions with scholarship of innovative PhD programme with industrial characterization  
(cycle XLI - aa.yy. 2025/2028)**

**PhD programme in QUANTITATIVE METHODS IN ECONOMICS**

**PhD Coordinator: Prof. Margherita Scoppola**

Positions with scholarship

2

Curriculum/Research topics	Description
<p><b>MAPPING THE LEVEL OF DIGITALISATION IN THE MARCHE PRODUCTION SYSTEM AND ANALYSING THE IMPACT ON COMPANY PERFORMANCE AND EMPLOYMENT</b></p> <p><b>Curriculum QME3 - ADVANCED DATA ANALYSES</b></p>	<p>The Ph.D. program is developed over three years:</p> <ul style="list-style-type: none"> <li>a first year of courses, seminars and exams common to all curricula and aimed at teaching advanced topics in quantitative methods;</li> <li>a second year of international research and training, spent in international institutions (with an increase of 50% for the research scholarship amount) and by a company of the cluster;</li> <li>a third year of research activity for completing the Ph.D. thesis.</li> </ul> <p>The research will provide a comprehensive and up-to-date overview of the level of digitalization within the production system of the Marche region, analyzing its determinants, areas of application, and effects on business performance and employment. The PhD student will collect, integrate, and analyse microeconomic data, through advanced tools in quantitative analysis, such as Machine Learning techniques applied to economics, the construction of composite indicators, and impact evaluation.</p>
<p><b>VULNERABILITY AND RESILIENCE OF THE MARCHE AGRICULTURAL AND FOOD SYSTEM (RESILIA)</b></p> <p><b>Curriculum QME2 - MATHEMATICAL, STATISTICAL AND ECONOMETRIC METHODS</b></p>	<p>The Ph.D. program is developed over three years:</p> <ul style="list-style-type: none"> <li>a first year of courses, seminars and exams common to all curricula and aimed at teaching advanced topics in quantitative methods;</li> <li>a second year of international research and training, spent in international institutions (with an increase of 50% for the research scholarship amount) and by a company of the cluster;</li> <li>a third year of research activity for completing the Ph.D. thesis.</li> </ul> <p>The research will analyze the economic prospects of the agri-food system in the Marche region, assessing the impact of external shocks on regional production dynamics and identify the main drivers of economic vulnerability and resilience. The PhD student will develop macroeconomic impact simulations on production, income, employment, exports, and the participation and positioning in global value chains, under different scenarios. It will also carry out econometric analyses to evaluate the impact of external shocks on the Marche agri-food system.</p>

<p><b>Language requirements</b></p>	<p>English B2 level or higher.</p> <p>For candidates for whom Italian is not L1: basic knowledge of the Italian language</p>
<p><b>Obligations for enrollees</b></p>	<p>Lessons attendance of your own curriculum, <b>and</b> of QME programme's other curricula <b>and</b> lessons attendance of the PhD School (for the number of credits established by the guidelines).</p> <p>Enrollees in the second or third year must spend a minimum <b>six-months</b> period abroad at Universities or Research Centers</p> <p>Study and research activities in one or more companies belonging to the project partner cluster.</p>