

## Syllabus

### Course description

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| <b>Course title</b>               | Applied Econometrics   |
| <b>Course code</b>                | 27213  |
| <b>Scientific sector</b>          | SECS-P/05  |
| <b>Degree</b>                     | L-33 Bachelor in Economics and Social Sciences<br>(Curriculum Social Sciences) |
| <b>Semester and academic year</b> | 2nd semester 2020/2021   |
| <b>Year</b>                       | 2nd year   |
| <b>Credits</b>                    | 6  |
| <b>Modular</b>                    | No   |

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| <b>Total lecturing hours</b> | 36  |
| <b>Total lab hours</b>       | ---   |
| <b>Total exercise hours</b>  | 18  |
| <b>Attendance</b>            | suggested, but not required   |
| <b>Prerequisites</b>         | Probability and Statistics course strongly suggested  |
| <b>Course page</b>           | <a href="https://www.unibz.it/en/faculties/economics-management/bachelor-economics-social-sciences/">https://www.unibz.it/en/faculties/economics-management/bachelor-economics-social-sciences/</a> |

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| <b>Specific educational objectives</b> | <p>The course refers to the typical educational activities and belongs to the scientific area of Economics.</p> <p>The aim of the module is to develop specific skills in applied econometric research by a mix of lectures, computer classes, and tutorials where each topic is discussed in both methodology and application. The intention is to introduce to the practice of econometrics by illustrating the methods and how they may be applied to problems of management and social science research.</p> <p>More specifically educational objectives include:</p> <ul style="list-style-type: none"> <li>- Ability to interpret the results of econometric analysis and draw appropriate conclusions.</li> <li>- Ability to apply theoretical and empirical models to a real world context.</li> <li>- Learn statistical/econometric software to perform econometric analysis.</li> <li>- Ability to efficiently plan and manage economic and business studies.</li> <li>- Enhance organisational, analytical and communication skills through participation in group project work</li> </ul> |
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| <b>Lecturer</b> | Eduardo Rossi<br>Office: E 3.10<br>e-mail: <a href="mailto:Eduardo.Rossi@unibz.it">Eduardo.Rossi@unibz.it</a> |
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|  | Web: <a href="https://www.unibz.it/en/faculties/economics-management/academic-staff/person/43880-eduardo-rossi">https://www.unibz.it/en/faculties/economics-management/academic-staff/person/43880-eduardo-rossi</a>  |
| <b>Scientific sector of the lecturer</b> | SECS-P/05   |
| <b>Teaching language</b>                 | English   |
| <b>Office hours</b>                      | 18 hours<br>Cockpit – students’ zone – individual timetable<br>Webpage:<br><a href="https://www.unibz.it/en/timetable/?sourceId=unibz&amp;department=26&amp;degree=13182%2C13324">https://www.unibz.it/en/timetable/?sourceId=unibz&amp;department=26&amp;degree=13182%2C13324</a>  |
| <b>Lecturing assistant</b>               | Francesco Ravazzolo (18 hours)<br>e-mail: <a href="mailto:francesco.ravazzolo@unibz.it">francesco.ravazzolo@unibz.it</a><br>Web: <a href="https://www.unibz.it/it/faculties/economics-management/academic-staff/person/36066-francesco-ravazzolo">https://www.unibz.it/it/faculties/economics-management/academic-staff/person/36066-francesco-ravazzolo</a>              |
| <b>Teaching assistant</b>                | ---   |
| <b>Office hours</b>                      | ---   |
| <b>List of topics covered</b>            | <ul style="list-style-type: none"> <li>- Statistics and probability review</li> <li>- Linear Regression with a Single Regressor: estimation, hypothesis testing and confidence interval.</li> <li>- Linear Regression and with Multiple Regressors</li> <li>- Hypothesis Tests and Confidence Intervals in Multiple Regression</li> <li>- Nonlinear regression</li> </ul> |
| <b>Teaching format</b>                   | Lectures, practical exercises, and group project.   |

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| <b>Learning outcomes</b> | <p><b>Knowledge and understanding</b><br/>The aim of the course is to equip students with a working knowledge of important econometric techniques. Students should be able to correctly specify, estimate and test the econometric models and to interpret properly results from the undertaken analyses.</p> <p><b>Applying knowledge and understanding</b><br/>Ability to perform econometric analysis. Students know how to use essential tools for working with economic data. Ability to perform all the mentioned econometric techniques by using appropriate software.</p> <p><b>Making judgments</b><br/>Ability to formulate models and to implement appropriate econometric tools for both the analysis and the interpretation of economic facts.</p> <p><b>Communication skills</b><br/>Ability to present in a consistent and precise manner the results obtained from the econometric analysis.</p> <p><b>Learning skills</b><br/>Ability to understand and analyze economic data from a quantitative perspective.</p> |
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| <b>Assessment</b>  | The final exam consists in a presentation of an applied project where models and techniques illustrated in the course are implemented.   |
| <b>Assessment language</b>                                 | English  |
| <b>Evaluation criteria and criteria for awarding marks</b> | <p>Final grade is determined by the written exam.</p> <p>The purpose of the exam is to ascertain that students acquire the knowledge required to correctly use the econometric tools discussed during the lectures and possess the ability to properly interpret the results provided by these procedures.</p>                                     |
| <b>Required readings</b>                                   | Jim H. Stock and Mark W. Watson, <i>Introduction to Econometrics</i> , Pearson International 4th Edition.  |
| <b>Supplementary readings</b>                              | <p>Marno Verbeek, <i>A Guide to Modern Econometrics</i>, Wiley 4th Edition.</p> <p>Christiaan Heij, Paul de Boer, Philip Hans Franses, Teun Kloek, and Herman K. van Dijk, <i>Econometric Methods with Applications in Business and Economics</i>, Oxford University Press.</p> <p>Additional references will be provided during the lectures.</p> |