Statistics Economics

Single Courses

a.y. 2020-2021, 2nd semester, 12 ECTS Credits

Prof. Francesco Rania

Course Information	Statistics Economics and Finance (SECS-S/03) 12 ECTS Lesson period: 2nd semester, a.y. 2020-2021 Single Courses
Professor Information	Prof. Francesco Rania Department of Law, Economy and Sociology Website: https://www.diges.unicz.it/web/docenti/rania-francesco/ Email: raniaf@unicz.it Phone: +39 0961 3694 4987 Office hours: during the lesson period; before and after the lessons and every month before the examination
Course Description	The aim of the course is to provide probabilistic and statistical tools for the quantitative treatment of data on economic phenomena observed in time and space.
Course goals and Expected Learning Outcomes	Upon course completion, a student will be able to: • Know and apply the index numbers, simple and complex. • Understand National Accounts and know main economic aggregates; • Describe the relationship among the variables characterizing development, growth, labour, production, and wellness of a country; • Estimate efficiency measures, and temporal variations; • Perform analysis of time series regarding economic phenomena; • Measure effects of growth, development, unemployment, and productivity.
Program	Elements of Statistics: univariate descriptive statistics: frequency tables, graphical summaries (plots), summary statistics; contingency table; Random variables; Elements of point estimate statistics; Hypothesis tests. Index numbers: classification of index numbers; numbers elementary indices, fixed-base, a mobile base; Synthetic index numbers; Choice of the base; Choosing the method of calculation; properties and formal conditions of index numbers; Index numbers calculated by ISTAT: Laspeyres, Paasche e Fisher; numbers of prices, productions, exchanges, and labor. National Accounts and economic aggregates: characteristics of SEC95, operations among economic aggregates, the production and distribution account, the use of income, the accumulation accounts, the balance sheet, and the accounts of the rest of the world. Series analysis: classical analysis of time series; models for economic time series; the approach based on deterministic functions; approach with stochastic components; stochastic processes ARIMA. Analysis of growth, development, and labor: economic growth; growth accounting and structural indicators; the labor market ; sources of labor force statistics; synthetic indices and specific employment and unemployment Labour; Analysis of production: economic interdependences, input-output table; framework of an open economic system; social accounting matrix; indices of sectoral Integration; the production function and the measurement of productivity; production function; the production function of Cobb Douglas; productivity indicators; Solow model. Welfare Analysis: Consumption analysis; the function of aggregate consumption; specification and estimation of the parameters of a function of consumption; models and measures of income inequalities, prices elasticity.

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<tr><td>Expected student workload</td><td>Approximately 90 hours.</td></tr>
<tr><td>Teaching methods</td><td>- Lectures
- Problem-solving
- Exercises during the classroom lessons</td></tr>
<tr><td>Learning resources (textbooks, eventual further reading, ...)</td><td><u>Textbook</u>
• R. Guarini, F. Tassinari, Statistica Economica, il Mulino manuali, 2000

<u>Further reading</u>
• Paolo Chirico, Lezioni di statistica economica, G Giappichelli Editore, 2013
• Simone. Compendio di Statistica economica, 2014.</td></tr>
<tr><td>Support activities</td><td>Subject-specific seminars</td></tr>
<tr><td>Attendancy policy</td><td>The attendancy policy is established by art. 8 of the University teaching regulation: http://www.unicz.it/pdf/regolamento_didattico_ateneo_dr681.pdf.</td></tr>
<tr><td>Assesment Methods</td><td>The course includes intermediate assessment tests for attending students. The examination is written and oral. The student must have obtained a score of 14/30 in the written part to be able to sit for the final (oral) part.
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<tr><th>Grade</th><th>Grade knowledge and understanding of the topic</th><th>Ability to analyze and synthesize</th><th>Use of references</th></tr>
<tr><td>Fail</td><td>Severe shortcomings and inaccuracies</td><td>Irrelevant frequent generalizations. Inability to synthetize</td><td>Completely inappropriate</td></tr>
<tr><td>18-20</td><td>Sufficient. Important shortcomings.</td><td>Sufficient capabilities</td><td>Sufficient</td></tr>
<tr><td>21-23</td><td>Basic knowledge</td><td>The student is capable of correct analysis and synthesis, he argues logically and consistently</td><td>The student uses standard references</td></tr>
<tr><td>24-26</td><td>Satisfactory. Good knowledge</td><td>The student has good analysis and synthesis skills. The arguments are expressed consistently</td><td>The student uses standard references</td></tr>
<tr><td>27-29</td><td>Very good</td><td>The student has considerable skills in analysis and synthesis</td><td>The student studies in depth the topics of the exam</td></tr>
<tr><td>30-30L</td><td>Excellent</td><td>The student has Excellent analysis and synthesis skills</td><td>Important insights</td></tr>
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