. - **Institutions of Political Economy and Statistics**

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***Text under revision. Not yet approved by academic staff.***

Political Economy Module

Prof. Claudio Soregaroli

COURSE AIMS AND INTENDED LEARNING OUTCOMES

The module aims to provide the basic elements of economic analysis. Starting from the fundamental concepts of the market economy, the module introduces microeconomic analysis, addressing consumer and production theories and then describing the functioning of markets and the main forms of market, from perfect competition to monopoly. The module also aims to provide students with a general understanding of the main macroeconomic indicators and the relationships between the economic cycle and fiscal/monetary policies.

At the end of the course, students will be able to use the main tools of economic science to interpret reality. They will be able to analyse market trends by distinguishing the forces that influence supply and demand. Students will know the differences between the different market forms, appreciating their relevance and impact on economic efficiency and social well-being. Finally, students will have the tools to grasp the salient aspects of the macroeconomic debate.

The module is preparatory to the courses in which, in the following years, students will be able to explore more deeply the economic aspects of the agro-food system.

COURSE CONTENT

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| --- | --- |
|  | ECTS |
| **Introductory concepts** Economics: what it is and what it studies. The economic system: definition and functions. The fundamental elements of a market economy. | 0.5 |
| **Market and microeconomic analysis** The functioning of markets: demand, supply, elasticity. The theory of consumer behaviour. Production theory. Production costs and the economic objectives of companies. Market forms: from perfect competition to monopoly. | 3.5 |
| **Fundamentals of macroeconomics** Nominal and real variables, rates of change, price indices. Macroeconomic objectives and their measurement. Aggregate demand, aggregate supply and equilibrium of an economic system. The Keynesian model and fiscal policy. Money and monetary policy. | 1.0 |
| Practical activities | 1.0 |

READING LIST

P. Krugman-R. Wells, *L'essenziale di Economia*, Zanichelli, 3rd Italian ed., Bologna, 2018 (ISBN: 9788808720689)

Other recommended texts:

PA Samuelson-WD Nordhaus-CA Bollino, *Economia*, McGraw-Hill, 21st ed., Milan, 2019. ISBN: 9788838694806

TEACHING METHOD

The module provides five credits for frontal classroom teaching and one credit for practical activities, in which students will be asked to apply the concepts studied to concrete cases.

ASSESSMENT METHOD AND CRITERIA

The final mark is calculated according to the following weights:

Classroom presentation of group work (group assessment) 8/30

Classroom discussion of group work and case studies (group and individual assessment) 4/30

Final exam (individual assessment) 18/30

The group work is based both on the presentation of theoretical concepts and on the practical application of these concepts in the form of exercises and case studies. The presentation of the group work will be assessed according to the following criteria:

1. analysis capabilities;
2. clarity of presentation;
3. ability to answer the questions posed by the class.

In the discussion of the group work, the whole class is called upon to intervene on the concepts presented during the presentation. The intervention will be assessed individually or as a group according to the following criteria:

1. ability to express a critical judgment;
2. ability to answer the questions raised during the debate in class.

The final exam is conducted on Blackboard and comprises an initial set of multiple-choice questions followed by open-ended questions that include exercises and theoretical content, relating to the entire course content. The duration of the test is 80 minutes.

For the purposes of the assessment, the written answers will be examined on the basis of students' reasoning and problem-solving skills, their analytical rigour on the topics covered by the course, their command of the language and their ability to apply the theory to real situations. More specifically, emphasis will be placed on the basic issues discussed during lectures, with particular attention on real applications, insights and the methods for solving the problems presented during the practical activities.

NOTES AND PREREQUISITES

More precise indications on the programme details and on the text sections that will be used will be provided during the course.

Prerequisites:Students must possess a basic knowledge of mathematical concepts, with particular reference to the study of functions.

Information on office hours available on the teacher's personal page at http://docenti.unicatt.it/.

Statistics Module

Prof. Claudia Lanciotti

COURSE AIMS AND INTENDED LEARNING OUTCOMES

The purpose of the module is to introduce the basic statistical elements and methods for the processing and analysis of data and their transformation into usable information. Starting from the raw data, the course will provide the tools for summarising, presenting and interpreting the behaviour of phenomena observable in the real world, taken individually and in relation to each other. In addition, the module presents inferential statistical techniques in order to understand and use the instruments in conditions of uncertainty.

At the end of the course, students will be able to summarise and describe the behaviour of particular phenomena observable in different environments, study their relationships in pairs, analyse and understand the results of statistical surveys, as well as apply the basic techniques of statistics to problem solving.

COURSE CONTENT

|  |  |
| --- | --- |
|  | ECTS |
| Monovariate descriptive statistics | 1.0 |
| Basic definitions and notations, measurement scales, frequency distributions, tables, and graphs.Central trend indices, variability indices, Lorenz curve.Statistical reports and index numbers. |  |
| Bivariate descriptive statistics | 2.0 |
| Double-entry tables and bivariate graphical representations.Statistical independence, global association and local association measures.Variance decomposition and mean independence.Correlation and regression analysis. |  |
| Inferential statistics | 1.0 |
| Probability and random variables.Sample distributions, estimates and estimators.Confidence Intervals.Statistical tests. |  |
| Practical activities. Application of statistical tools with the use of the spreadsheet. | 1.0 |

READING LIST

F. Mecatti, *Statistica di base. Come quando perché*, 2nd Ed., McGraw-Hill Companies, Milan, 2015 (ISBN: 9788838615122)

Other recommended texts:

D. Piccolo, *Statistica per le decisioni. La conoscenza umana sostenuta dall'evidenza empirica*, Il Mulino, Bologna, 2020 (ISBN: 9788815272201)

TEACHING METHOD

Five lecture credits are awarded in classroom with the support of presentations and examples, while one practical activity credit is carried out in the computer lab using the Excel program.

ASSESSMENT METHOD AND CRITERIA

A written exam divided into three parts.

The first part is a 90-minute classroom test, which involves the resolution of 3-4 exercises, with relative interpretation of the results. This test is aimed at checking the student's knowledge of the first part of the program. The assessment is marked out of 30 and contributes 30% to the final mark.

The second part is also a classroom test, consisting - like the first - of 3-4 exercises with possible theoretical questions, and is aimed at verifying the student's knowledge of the second and third parts of the program. The assessment is marked out of 30 and contributes 35% to the final mark.

The third part of the exam takes place in the computer lab and is aimed at assessing the concepts of the entire module program but with the use of Excel functions. The duration is 120 minutes, and the assessment is marked out of 30 and contributes 35% to the final mark.

NOTES AND PREREQUISITES

Familiarity with the basic concepts of mathematics is required.

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