## **Applied Economics (Emerging Markets and Technologies)**

## Prof. Gabriele Pellegrino

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course aims to introduce students to the economic issues related to the spreading of new digital technologies, the platform economy, and the impact of the so-called fourth industrial revolution on economic growth, the labour market trend, and income distribution in the main advanced economies, with a focus on the Italian economy.

Furthermore, it aims to provide students with the interpretive tools – both theoretical and empirical – that are necessary for a critical understanding of the topics analysed each time.

At the end of the course, students will be able to know the key econometric techniques adopted in the field of applied economics, as well as discuss and form a critical opinion on the latest scientific contributions on the economic impact of new technologies and digital platforms.

***COURSE CONTENT***

1. An introduction to econometric methods:

- The problems faced by econometrics, the types of data, and the econometric models

- The linear regression model: the estimation method and the main assumptions

- Focus on other estimation methods: diff-in diff, IV

2. Innovation and growth

* Stylised facts of growth and the exogenous growth model
* Endogenous growth models
* Evolutionary models

3. Intellectual property

* Economic motivation and the role of intellectual property;
* Patents;
* Industrial secret;
* Brand;
* Copyright.

4. A Fourth Industrial Revolution? From ICTs to new digital technologies

 - Techno-economic paradigms, industrial revolutions, and General Purpose Technologies (GPTs);

* From ICTs to the new digital technologies
* The features of the fourth industrial revolution

5. Digital technologies, labour market, and income distribution

 - Technological unemployment in the digital era

 - Income inequalities in the digital era

 - Industrial policies for the digital transition in Italy and Europe

6. The concept of open innovation and its implications in the era of Industry 4.0 - Closed innovation vs. Open innovation

 - Factors that are eroding the closed innovation model

 - Open Innovation and innovative performance

***READING LIST***

F. Compagnucci-A. Gentili-E. Valentini, *La quarta rivoluzione industriale e l’economia italiana*, Carocci, 2022.

E. Brynjolfsson-A. McAfee, *La nuova Rivoluzione delle macchine. Lavoro e prosperità nell’era della tecnologia trionfante*, Feltrinelli, 2015.

A more detailed syllabus, together with further teaching material, will be made available on-line on the dedicated platform Blackboard.

***TEACHING METHOD***

The course, delivered in a blended mode, will include face-to-face (50%) and remote (50%) activities.

The former will consist in interactive lectures aimed to explain the topics under analysis. The latter will include video lectures (asynchronous), webinars (synchronous) based on active discussions on articles or cases, and live feedbacks. The syllabus containing an analytical description of the course content will be made available on Blackboard.

***ASSESSMENT METHOD AND CRITERIA***

*A. Progressive assessment*

For the students opting for a progressive assessment: 50% will be carried out through two tests (an individual written test and a group assignment), taking place during the course, according to methods, contents, and timing that will be made available on the Blackboard area reserved for the students registered to the course; 50% will be carried out through a final written test lasting 45 minutes. Students will be admitted to the final exam only after getting a positive mark in the tests taken during the course. In order to pass the exam, students will have to get a positive mark in the final test (please note that the final test must be taken in one of the 3 official exam dates following the end of the course).

*B. Summative assessment*

For the students opting for a summative assessment on one of the official exam dates, the exam will consist in a written test of 90 minutes.

***NOTES AND PREREQUISITES***

Students should have a basic knowledge of the key concepts of microeconomics.

Further information can be found on the lecturer’s webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENGor on the Faculty notice board.