**IT Laboratories**

Prof. Roberto Bernazzani

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

The course aims to allow students to experience, through laboratory and practical sessions, the concrete application of the most innovative information technologies on the market today.

At the end of the course, students will be able to take an active part in projects of innovation and implementation of digital technologies, acquiring awareness of the potential but also of the (technical, economic, organisational, and strategic) complexities of these processes.

With reference to the main technologies addressed during the course, students will acquire, among others, the following skills:

* Define the customer value proposition of new businesses enabled by the use of Blockchain and DLT technologies
* Define application scenarios, in the industrial field, of virtual, augmented, and mixed reality technologies
* Understand the role of business accelerator played by data analysis
* Design the technical and economic component of a cloud computing architecture
* Choose, on the basis of qualitative and quantitative analyses, between an e-commerce strategy through a proprietary site and one based on a marketplace.

***COURSE CONTENT***

The detailed programme of activities will be defined at the start of the academic year. The course will include practical activities such as laboratories, workshops, testimonials and company visits relating to the various issues concerning innovation and process digitisation.

By way of example, below you will find a list of some application areas that will be covered during the course:

* Blockchain and DLT
* Artificial Intelligence (AI) and Machine Learning
* Virtual and augmented reality (VR/AR)
* Data analytics
* Internet of Things (IoT)
* Cloud computing
* E-commerce strategies
* 3D printing

***READING LIST***

Due to its laboratory character - divided into seminars with an operational part - the course does not include an official reading list of reference.

Thematic in-depth materials (textbooks, articles, presentations, vertical websites, online tools, white papers, etc.) will be distributed during the individual laboratory activities and made available for consultation through the Blackboard platform.

***TEACHING METHOD***

The teaching method of the course will consist of practical lessons that can take one or more of the following forms: laboratories, workshops, testimonials and company visits, hackaton and competition.

***ASSESSMENT METHOD AND CRITERIA***

The course assessment does not consist in the attribution of a mark out of thirty, but proficiency is automatically assigned to students who have successfully participated in at least 80% of the laboratories offered.

A laboratory is considered to be regularly attended if the students’ presence in the classroom has been registered and the expected practical activities, individual or group work, have been carried out with at least sufficient outcome.

Students who have not reached the minimum laboratory attendance of 80%, will have to take an alternative exam consisting in the preparation of a paper of at least 15 pages that illustrates a concrete application to the business environment of one of the technologies addressed during the laboratories.

***NOTES AND PREREQUISITES***

None.

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