# Specialist module with workshop: Virtual reality and metaverse techniques for well-being

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

Knowledge and understanding

The course aims to provide students with a theoretical and practical understanding of the technologies related to Virtual Reality. It will introduce the theoretical foundations at the basis of the digital revolution that has led to the spread of Virtual Reality. Furthermore, during the course, students will have the possibility to test different types of Virtual Reality headsets and effectively assess how the different technological evolutions have led to increasingly immersive experiences. This will allow them to acquire a practical knowledge of the different Virtual Reality platforms, assessing their potential practical applications. The practical experience with headsets like Oculus Rift and Oculus Quest, as well as CardBoard Mobile, will allow them to study in depth the application of Virtual Reality to different fields, from the promotion of well-being, to communication, rehabilitation, and empowerment.

In particular, the course aims to:

* Provide a theoretical framework to conceptualise the potential of Virtual Reality for the transformation of the human communication experience, with applications in the field of well-being, communication, and rehabilitation.
* Allow students to get practical experience in the use of the different types of Virtual Reality technologies (e.g. Oculus Quest, Rift, e MobileCardBoard), therefore developing concrete knowledge about the methods, the models, and the tools that characterise Virtual Reality and its practical applications.

Ability to apply knowledge and understanding

At the end of the course, students will be able to acquire knowledge of the specific topics related to Virtual Reality and the psychological processes implied in the use of this technology. In addition, they will be able to identify the main Virtual Reality platforms, with a focus on immersive virtual reality. Furthermore, students will be able to develop their practical knowledge of the functioning of the most important Virtual Reality headsets (e.g. Oculus Rift and Oculus Quest, Video360). Finally, they will be able to assess the potential applications of Virtual Reality in the promotion of people’s well-being.

***COURSE CONTENT***

The course will be characterised by a *theoretical* and a *practical* part.The *theoretical* part will introduce the history, the technology, and the description of Virtual Reality systems, analysing the potential application of this new tool in different fields, from design and education, to health promotion. It will analyse in depth the psychological aspects behind the immersive processes in Virtual Reality, with a focus on the concept of *simulation*, *presence*, and *embodiment*. The practical part will introduce students to the use of the technological platforms of Virtual Reality with different degrees of complexity, from Video360 to immersive environments through the use of Oculus Quest and Rift headsets. Then, practical activities in small groups will be organised to allow students to get familiar with the use of Virtual Reality technology.

***READING LIST***

The reading list for the exam will include a compulsory textbook for all students:

G. Riva – A. Gaggioli, *Realtà virtuali: gli aspetti psicologici delle tecnologie simulative e il loro impatto sull'esperienza umana*. Giunti Psychometrics, 2019.

***TEACHING METHOD***

The course will be characterised by frontal lectures in class, supported by multimedia presentations, practical activities, and simulations.

***ASSESSMENT METHOD AND CRITERIA***

The assessment will be based on an assignment, to be carried out either individually or in groups, according to the students’ preferences. The assignment will consist in the proposal of a project for the application of Virtual Reality in a field of their choice. It will have to reflect the students’ understanding of the key processes that play a fundamental role in Virtual Reality experiences. Then, the assignment will be discussed during an interview with the lecturer aimed to assess the theoretical bases of the project proposed. Students will be evaluated also on their criteria of originality and the potential impact of their project in the field of application of their choice. The interview will include also questions on the topics analysed in class and the contents specified in the reading list.

***NOTES AND PREREQUISITES***

There are no prerequisites for attending the course. In case the current Covid-19 health emergency does not allow frontal teaching, remote teaching will be carried out following procedures that will be promptly notified to students.

*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.*