

DIGITAL HUMANITIES (LM70)

(Università degli Studi)

Teaching VIRTUAL AND AUGMENTED REALITY APPLICATIONS

GenCod A004196

Owner professor Lucio Tommaso DE PAOLIS

Teaching in italian VIRTUAL AND AUGMENTED REALITY APPLICATIONS

Teaching VIRTUAL AND AUGMENTED REALITY APPLICATIONS

SSD code ING-INF/05

Course year 2

Language INGLESE

Curriculum COMUNE/GENERICO

Reference course DIGITAL HUMANITIES

Course type Laurea Magistrale

Credits 9.0

Teaching hours Ore-Attivita-frontale: 63.0

For enrolled in 2021/2022

Taught in 2022/2023

Location

Semester Primo-Semestre

Exam type Orale

Assessment Voto-Finale

Course timetable

<https://easyroom.unisalento.it/Orario>

BRIEF COURSE DESCRIPTION

The course presents a review of current Virtual Reality (VR) and Augmented Reality (AR) technologies and provides a detailed analysis of the scientific and functional aspects of VR systems. The course also will introduce to the 3D modelling and the building of spatial augmented reality applications.

REQUIREMENTS

no requirements

COURSE AIMS

Students will be acquired knowledge in the main application of VR and AR technologies in cultural heritage.

TEACHING METHODOLOGY

The teaching consists of theoretical and practical lectures.

ASSESSMENT TYPE

The final exam consists in the discussion on the project developed by the student.

FULL SYLLABUS

- Introduction to the Virtual Reality technology
- Visualization devices
- Interaction in the virtual environment
- Introduction to the Augmented Reality technology
- Marker-based and markerless augmented reality applications
- Virtual and Augmented Reality in Cultural Heritage
- 3D modeling - Blender
- Spatial augmented reality (video mapping)
- Practical lectures in laboratory

REFERENCE TEXT BOOKS

MONTAGNA L., Realtà Virtuale e Realtà Aumentata, Hoepli, 2018

MANIELLO D., Realtà aumentata in spazi pubblici. Tecniche base di video mapping, Le Penseur, 2014

MANIELLO D., AUGMENTED HERITAGE: dall'oggetto esposto all'oggetto narrato, Edizioni Le Penseur

SIDDI F., Grafica 3D con Blender, Apogeo, 2009