

# 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

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**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** 2020/2021

**Taught in** 2021/2022

**Location**

**Semester** Secondo-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

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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