

# UNIVERSITY OF CHIETI-PESCARA



Master's degree in BUILDING ENGINEERING – ENGINEERING MANAGEMENT OF CULTURAL HERITAGE

https://idclm24.unich.it/pagina-curriculum-in-engineering-and-management-of-cultural-heritage-1559

**Degree:** Building engineering – engineering management of cultural heritage

Degree Class: LM24 Duration: 2 years ECTS credits: 120 Language: English

#### Department of ENGINEERING AND GEOLOGY

Director of Department Prof. Sergio Montelpare Email sergio.montelpare@unich.it

#### Location Pescara Campus

Course Coordinator Prof. Alessandro Pagliaroli Email <u>alessandro.pagliaroli@unich.it</u>

Student office segrdidattica.ingeo@unich.it

International Welcome Office hello@unich.it



## **COURSE DESCRIPTION**

The conservation and enhancement of existing structures is one of the most challenging problems facing modern civilization involving aspects belonging to many different disciplines: Structural and Geotechnical Engineering, Architecture, Monitoring, Geology, Materials Engineering, Acoustic, Energy Engineering.

This Master program is designed to shape Engineers with multidisciplinary professional skills to manage the puzzling problems related to the maintenance, preservations and restorations of existing structures, monuments and historic sites. These Engineers will be able to couple the requirements of a safety use of the Cultural Heritage structures with the respect of formal and historical identity.

The courses are completely taught in English by professors from the Department of Engineering and Geology of Chieti Pescara University and highly qualified professors from international Universities.

Italy has 60-70% of the world's cultural assets according to UNESCO's estimates, this Master is hosted in Pescara in the Abruzzo region (Central Italy) that features a coastal-hillside and a mountainous part, hosting three national parks. This geo-morphological conformation makes Abruzzo a territory rich in history and culture, with historical villages, medieval castles, and majestic churches.

### **CAREER OPPORTUNITIES**

**Public sector:** work for government agencies, superintendencies, municipalities, and regional offices, managing and maintaining historic buildings and monuments.

**Professional studios and consultancy:** freelancers or collaboration with engineering and architectural firms specializing in restoration and conservation.

**International organizations:** heritage protection projects on a global scale, collaborating with institutions like UNESCO or other cultural entities.

**Construction companies:** firms specializing in the restoration and rehabilitation of historic buildings, ensuring the use of appropriate and respectful techniques.

**Research and academia:** scientific research and university teaching, developing new methodologies and technologies.

**Museums and cultural foundations:** management and maintenance of historic buildings used as museums, cultural centers, or foundations, ensuring their preservation.

### **ADMISSION REQUIREMENTS**

- A Bachelor (first-level) Degree in Civil/Environmental Engineering or Building Engineering/Architecture acknowledged by the Italian Government. A solid knowledge in structural engineering is required. A pre-enrolment procedure will evaluate the applicant's career to assess its compliance with the requirements of the Master's Degree in Cultural Heritage (CH).
- Knowledge of the English language at a level not lower than B2 of the Common European Framework of Reference (CEFR). This requirement can be assessed by a language certification from a recognized institution or directly evaluated with an online interview with an internal Committee from our Department.

### **COURSE ORGANIZATION**

The MSc program lasts 2 years and awards 120 ECTS:

- First Year From September to May
- Second Year From September to May
- Second Year Traineeship and Final Thesis

### STUDY PLANE 1st year

#### Course

**ECTS** 

12 ECTS

1) Integrated Course on Techniques for Historical Buildings Rehabilitation and Restoration

<ol> <li>Integrated Course on Techniques for Historical Buildings Rehabilitation and Restoration</li> </ol>	
Conservation Theory of Historical Buildings and Heritage Conservation	
Renovation, maintenance and conservation of historical buildings	12 ECTS
2) Computational Analysis of Historical Buildings and Cultural Heritage	6 ECTS
3) Applied Acoustics and Lighting in Cultural Heritage	6 ECTS
4) Integrated Course of Structural Diagnostics for Cultural Heritage	
Structural Dynamics	
Seismic Behavior of Historical Buildings	12 ECTS
5) Close Range Photogrammetry and 3D Laser Scanning	6 ECTS
6) Geotechnical Engineering for the Preservation of Cultural Heritage	6 ECTS
7) Natural and Artificial Materials for Historical Buildings and Cultural Heritage	6 ECTS

### 2nd year

#### Course

8) HVAC for Historic Building and Cultural Heritage	6 ECTS
9) Structural Monitoring and Diagnostics	6 ECTS
10) Integrated Course of Masonry and Historical Structures	
Structural Strengthening	
Masonry and Wood Structures of Historic Buildings	12 ECTS
11) Integrated Course of ICT in Cultural Heritage	
Heritage BIM	
Computer Science and Intelligent Systems	12 ECTS
12-13) Two optional (for a total 12 ECTS) courses among:	6 ECTS
- Seismic Geotechnics for Geohazard Risk Mitigation in Cultural Heritage	
- Geophysical methods for cultural heritage	
- Seismic hazard and risk	
- Mineralogical and Petrographical Characterization of Natural and Artificial Stone Materials	12 ECTS
14) Traineeship	6 ECTS

15) Final Master Thesis dissertation















### To reach the University of Chieti-Pescara:

In **Pescara**, there is an **international airport** connected to several cities across Europe. The **intercontinental airport of Rome Fiumicino** is about **3 hours away by bus or train**.

### **Upon arrival in Chieti-Pescara**

- Application for a residence permit for STUDY
- Application for an Italian tax code (Codice Fiscale)
- Registration with the National Health Service

### Scholarships

When officially enrolled at the University of Chieti-Pescara, a student can apply for grants from the Regional agency for the Studies Rights - ADSU

### SERVICES

### Student office open:

Tuesday and Thursday: 10.00-12.00

### **European University Alliance**

INGENIUM, the Alliance of Diversity, committed to local and global challenges University of Chieti-Pescara is a full partner of INGENIUM European University Alliance INGENIUM is an alliance of ten institutions of higher education from ten European countries Studying at the University of Chieti-Pescara means studying at all INGENIUM universities. You will be able to move freely between the ten campuses and fully experience the INGENIUM spirit.

For more information <u>https://ingenium-</u><u>university.eu/</u>

### **University guide**

https://www.unich.it/sites/default/files /2024-09/3\_-university\_guide.pdf

### Living costs in Chieti-Pescara

**Chieti and Pescara**, neighboring cities in the Abruzzo region of Italy, offer a relatively affordable cost of living compared to larger Italian cities.

**Rent:** Around €200/300 per month for a room in shared apartment – €500/600 for accommodation in private campus

**Food:** Groceries budget is about €150-€250 per month.

Eating Out: A cheap meal costs about €15-€20; a mid-range dinner for one is around €30.

### Fees regulation:

https://www.unich.it/sites/default/files/2024-12/Tasse%20e%20Contributi%20tradotto.pdf

List of courses: <u>https://en.unich.it/node/147</u>

Study

regulation:

https://www.unich.it/sites/default/files

2024-12/Manifesto%20tradotto.pdf