



UNIVERSITÀ
DI PAVIA

Two-year MSc in

ENVIRONMENTAL ENGINEERING

RESILIENCE TO CLIMATE CHANGE
EFFECTS CURRICULUM

Overview

The huge impact of climate changes on the management of water resources, on the safeguard of the environment, and on soil protection requires experts capable of operating to mitigate the effects of climate changes, modern, innovative and interdisciplinary approaches, techniques and tools.

The academic activities planned by Master's Degree in Environmental Engineering – Resilience to Climate Change Effects (REACH) curriculum aim at training students will be able to analyse problems, build models to support decisions, plan and design actions and operations of natural and territorial interest

Starting from a reinforcement of previous bases in mathematics, hydraulics, sanitary engineering, applied geology, and hydraulic constructions, in this curriculum the topics related to climate dynamics, the impact of climate changes on aquatic ecosystems, the sustainable use of water resources in urban and agricultural environments, fluvial hydraulics and related hydraulic protection works and the use of satellite data are especially developed.

The curriculum is taught in English.

Entry Requirements

- 3-year Bachelor degree (or equivalent) in Engineering or similar background
- B1 level English proficiency

Subjects

FIRST YEAR

Continuum Mechanics, Groundwater Contamination, Water Energy Sustainable Urban Development, Reliable Design and Management of Urban Hydraulic Infrastructures, Numerical Methods in Engineering Sciences, Satellite Data Analysis, Climate Dynamics and Changes, Applied Geology to Environmental Sustainability, Sustainable Management of Water Resources in Agriculture
One subject to be chosen from this list: Landslides Hazard and Risk / Planning of Energy Conversion Systems

SECOND YEAR

Fluvial Hydraulics, Flood Propagation, Climate Change Impacts on Water Ecosystems, Environmental Planning and Assessment One or more subjects to be chosen from this list: Design of Hydraulic Structures for Environment Protection / Italian Language for Foreign Students / Agronomic Utilization of Residuals / Geomatics for Precision Agriculture
One subject to be chosen from this list: Computational Fluid Dynamics / Snow Avalanches and related Mountain Natural Hazards / Earth Surface and Processes / Structural Measures for Flood Risk Mitigation

Fees

The annual fee in Pavia ranges from €156,00 to €3.507,00 . Tuition fees are calculated on student's family income. Non-EU students have the option of a flat rate, set according to their country of origin.

Contacts & Information Faculty of Engineering



welcome@unipv.it



apply.unipv.eu