UNIVERSITÀ
DEGLI STUDI
DI MILANO

Master's degree programme in

Sustainable natural resource management

FACOLTÀ DI

Scienze Agrarie e Alimentari

Applications and admissions

Open, subject to entry requirements.

Admission requirements

- Students with an Italian University Degree
  This master's degree course (MSc) can be accessed by holders of a BSc in Town, regional and environmental planning, Agriculture or Forestry or Environmental sciences.

  Those with other bachelor's degrees who have acquired at least 30 ECTS in specific core disciplines specified in the Manifesto degli Studi will also be able to access it.
- Students without an Italian University degree
  Those holding another qualification obtained abroad and recognized as suitable by the admission commission will also be able to access.

Admission procedure for all students

Admission requires the verification of the curricular requirements specified above and of personal preparation. These verifications are carried out by a Commission. The verification aims to ascertain the candidate's possession of the necessary preparation in the basic subjects. If needed, the commission may require the candidate to integrate the information provided. No oral interview or written examination is needed for admission.

Proficiency in English at a B2 level or higher, under the Common European Framework of Reference for Languages (CEFR), is required for admission.

Objectives

The purpose of the Degree Course is to train professionals able to provide technical and scientific support to public administrations (Local Authorities, Regions, Ministries, international agencies), as well as to private organizations, both from within (as a staff member) and externally (consultants) in the definition, implementation and management of policies on natural resources and common goods, and of their relations with human activities, with particular reference to sectors that use natural resources and collective goods and that produce goods and services and for which it is necessary to ensure sustainable management.

This study programme intends to provide a wealth of knowledge, skills and abilities combining technical-engineering and biological dimensions of natural, environmental and land resources management, with a view to achieving Green Deal and ecological transition goals. Graduates will understand the role of natural resources in economic activities, as well as mastering governance, design, conservation, regulation and restoration techniques that are required to ensure their sustainability, durability and protection.

They will have high-level scientific and operational skills in the field of natural resources protection and enhancement; they will understand the technological and economic aspects of natural resources management, and will be equipped to perform a systemic analysis of the environment in its biotic and abiotic components and in the related interactions.

Career prospects

In the private sector, graduates can take on tasks of organization, evaluation, management and responsibility for problems that may involve an interaction between human activities and environmental systems. Graduates can enroll in the Italian Register of Agronomists and Forestry Doctors, after passing the State exam. In the public sector, they can support administrations on environmental and territorial policies, with particular reference to sustainable planning and management of the territory and natural resources, environmental protection, analysis and monitoring of environmental systems, design and implementation of interventions for the defense and conservation of soil and water resources, for the restoration and conservation of biotic and abiotic components of ecosystems.

More specifically, due to their skills, graduates will be able to find employment in:

- national and regional bodies and services for the defense and development of the environment and the territory (State Technical Services, National and Regional Agencies and Bodies for the Environment and the Territory, Parks and Protected Areas, Watershed Authorities, Technical Services and Regional, Provincial and Municipal Departments, Land Reclamation and Irrigation Consortia, Mountain Communities and Mountain Watershed Consortia);
- laboratories, professional offices and service companies operating both in the field of environmental and territorial planning and management, and in environmental monitoring and recovery;
- companies operating in the environmental, forestry, green infrastructure and environmental remediation management;
- companies operating in the protection and conservation of soil and water resources;
- environment and territory division of large companies;
- freelance professional in the environmental, agricultural, forestry, land and landscape sectors.

Degree syllabus

1st year

COMPULSORY LEARNING ACTIVITIES	ECTS
1st semester	
Data management	6
Hydrology	6
Natural resource economics	6
2nd semester	
Environmental law	6
Land planning and life cycle assessment	6
Statistical methods for the environmental research	6

ELECTIVE COURSES		
Table 1 **For students holding an Italian degree in the class L-25 Agricultural Sciences and Technologies, or having a similar background if graduated abroad:**		
1st semester	Ecology	6
1st semester	Law of territorial government and public contracts	6
Table 2 **For students holding an Italian degree in the class L-21 Territorial, urban, landscape and environmental planning sciences, or having a similar background if graduated abroad:**		
1st semester	Agricultural systems and soil science	6
1st semester	Ecology	6
Table 3 **For students holding an Italian degree in the class L-32 Sciences and technologies for the environment and nature, or having a similar background if graduated abroad:**		
1st semester	Agricultural systems and soil science	6
1st semester	Law of territorial government and public contracts	6

ELECTIVE COURSES		
Table 4 **A first laboratory to be chosen from:**	**ECTS PARTIAL**	**ECTS TOTAL**
2nd semester		
A1. Ecological and forest restoration - Module: Forest ecology and restoration design - Module: Remote sensing and functional ecology - Module: Soil dynamics in ecosystem restoration	5 6 4	15
C1. Environmental systems and anthropic impact - Module: Environmental plant physiology and microbial ecosystems - Module: Environmental chemistry	10 5	15
B1. Green infrastructures and nature-based solutions - Module: Green infrastructures planning and design - Module: Stream restoration - Module: Applied botany and woody species in landscape design	4 4 7	15

2nd year

Table 5 **A second laboratory to be chosen from:**	**ECTS PARTIAL**	**ECTS TOTAL**
1st semester		
B2. Agricultural water management - Module: Water resource assessment - Module: Economic and environmental assessment of water resource - Module: Farming system and water quality	4 7 4	15
C2. Bioremediation - Module: Environmental microbiology and phytoremediation - Module: Environmental chemistry	10 5	15
A2. Forest management and planning - Module: Sustainable management of mountain forests - Module: Assessment and mitigation of hydrogeological risk in the mountain environment - Module: Economic and environmental assessments of forest land management	5 7 3	15

Composition rule: the laboratory of the second year must be chosen from those marked with a different letter than the one chosen in the first year. A laboratory may not be activated if the number of students enrolled in it is less than five.
The laboratories marked with 'A' deal with forestry issues. One deals with environmental and ecosystem management, while the other addresses degradation and ecological restoration techniques.
The workshops with letter 'B' deal with issues related to water resources. In one of them the aim is to establish a system of green and blue infrastructures for ecological interconnection (greenways, ecological corridors and networks, urban-rural connections, etc.). In the other laboratory the focus is on regulating the use of water resources for productive uses, in the various aspects of withdrawal at the source, distribution and territorial and economic implications.
The laboratories marked with the letter 'C' deal with environmental matrices from a microbiological point of view and the interconnections with the soil and plant elements. One laboratory analyzes the impacts of human activities on the environment, while the other applies bioremediation techniques to polluted sites.

Other activities

- 15 ECTS of elective choice, to be acquired with courses offered by the University of Milan. Part of these 15 ECTS (normally up to 4) can be acquired by attending seminars, conferences, courses, or other activities organized by the University or another institution.
- Additional Language Skills: technical English (for Italian students); Italian (for international students without an Italian degree or diploma) (3 ECTS).
- Final exam (24 ECTS).

INFO

Disciplinary classification: Forestry and environment (LM-73)

Duration: 2 years (120 ECTS)

Attendance: Lesson attendance is strongly suggested.

Start of classes: Classes will start on September 25th, 2023.

Location:
Via Celoria, 2 - Milano

Websites:
snrm.cdl.unimi.it/en
www.unimi.it

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For further information: www.unimi.it - Education