



**UNIVERSITA' DEGLI STUDI DI MILANO**  
**MANIFESTO DEGLI STUDI A.A. 2022/23**  
**LAUREA MAGISTRALE IN**  
**SUSTAINABLE NATURAL RESOURCE MANAGEMENT (Classe LM-73)**  
**Immatricolati dall'a.a. 2022/23**

### **GENERALITA'**

<b>Classe di laurea di appartenenza:</b>	LM-73 SCIENZE E TECNOLOGIE FORESTALI E AMBIENTALI
<b>Titolo rilasciato:</b>	Dottore Magistrale
<b>Durata del corso di studi:</b>	2 anni
<b>Crediti richiesti per l'accesso:</b>	180
<b>Cfu da acquisire totali:</b>	120
<b>Annualità attivate:</b>	1°
<b>Modalità accesso:</b>	Libero con valutazione dei requisiti di accesso
<b>Codice corso di studi:</b>	G65

### **RIFERIMENTI**

#### **Presidente Collegio Didattico**

Prof. Luca Bechini

#### **Docenti tutor**

Study plan tutor

A-D Prof. Fabrizio Araniti

E-L Prof. Daniele Masseroni

M-Q Prof.ssa Chiara Mazzocchi

R-Z Prof. Giulio Senes

#### **Sito web del corso di laurea**

<https://snrm.cdl.unimi.it/en>

#### **Didactic Secretariat of the Faculty of Agricultural and Food Sciences**

via Celoria 2 - Milano Città Studi Tel. 0250316511-0250316512 Monday, Wednesday and Friday from 10.30 am to 12.30 am; Tuesday and Thursday from 2 pm to 4 pm. <https://informastudenti.unimi.it/saw/ess?AUTH=SAML>

#### **Head of study programme**

Tel. 0250316590 Email: [didattica.disaa@unimi.it](mailto:didattica.disaa@unimi.it)

#### **Student registrar**

via Celoria 18 - Milano Città Studi Tel. 0250325032 <https://www.unimi.it/en/study/student-services/welcome-desk-informastudenti/student-desks-locations-and-opening-hours> <https://www.unimi.it/en/study/student-services/welcome-desk-informastudenti>

### **CARATTERISTICHE DEL CORSO DI STUDI**

#### **Obiettivi formativi generali e specifici**

This study programme intends to provide a wealth of knowledge, skills and abilities combining the 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 for performing systemic analysis of the environment in its biotic and abiotic components and in the related interactions.

Graduates in Sustainable Natural Resource Management:

- Will have sound general knowledge and a good understanding of the scientific method required for the analysis of production and territorial systems and their interactions with the environmental system;
- Will be able to assess natural resources and the environmental impacts of economic activities by creating models, including through conceptual and methodological tools used in the field of economics, law and environmental planning;
- Will be able to use modern technologies for environmental assessment, monitoring and restoration, as well as for planning

efforts aimed at regulating and protecting natural resources and common goods.

In their respective professional fields, graduates:

- Must be able to provide technical-scientific support to the analysis and resolution of natural resources planning and public management issues, using economic, legal, analytical, statistical and IT tools;
- Must be able to carry out studies, research and analysis in support of forest, environmental, production and landscape resources regulation, conservation and enhancement policies, as well as for local sustainable development;
- Must be able to design and coordinate the design and implementation of green infrastructures for the protection and enhancement of the environment, forests, and rural and urban areas;

These skills must be enhanced by:

- The ability to work with methodological and operational autonomy, including in a coordination or managerial role;
- Good written and oral communication skills, both in their mother tongue and in English, including specialist lexicon;
- Public speaking skills, both in their mother tongue and in English, to convey information, ideas, problems and solutions, share general information and specialist knowledge;
- The ability to work in multidisciplinary working groups to produce reports and carry out projects.

### **Risultati di apprendimento attesi**

Expected learning outcomes include knowledge, skills and abilities related to the management of natural, environmental and territorial resources. The graduate will be capable to combine the technical-engineering aspects with the biological-naturalistic ones, helping to achieve the objectives of the Green Deal and the ecological transition. The knowledge and skills acquired will make it possible to combine knowledge of the role of natural resources within economic and civil activities, with the techniques of governance, design, conservation, regulation and restoration necessary to ensure their sustainability, durability and protection.

Graduates in Sustainable Natural Resource Management will have a high scientific and operational preparation in the disciplines concerning the protection and enhancement of natural resources and the technological and economic aspects of their public management, possessing the cultural tools to deal with the systemic analysis of the environment in all its biotic and abiotic components and their interactions.

#### Knowledge and understanding

The graduate will acquire:

- a solid basic cultural background and a good command of scientific methods of investigation in the environmental field;
- an essential legal basis to know the role of natural resources within companies to operate within the administrative systems that characterize public institutions;
- understanding of the interrelationships that characterize complex systems (ecosystems, agro-environmental systems, forest systems, etc.) and the role of natural resources within them;
- ability to manage information deriving from statistical surveys and environmental databases;
- tools for examining planning and management problems of natural resources, using analytical, statistical and information technology (IT) tools for the representation and analysis of environmental and territorial data;
- methods and techniques for the regulation, conservation and enhancement of natural, forest, ecological and landscape resources;
- methodologies for carrying out studies, research and analysis to support the management and regulation policies of natural resources and common goods (water, soils, forests, biodiversity, ecosystems, etc.) in the context of anthropic activities;
- knowledge of the design techniques related to green infrastructures and nature-based solutions;
- ability to assess the impact of human activities on natural resources and the environment through the formulation of models, also with the use of conceptual and methodological tools provided by economics, law and environmental planning;
- knowledge of how to design and test green and land defense infrastructures;
- knowledge of the principles for carrying out professional activities and the related legislation and ethics;
- ability to reflect on the social and ethical responsibilities associated with applying knowledge.

#### Ability to apply knowledge and understanding

The graduate will be able to:

- apply modern technologies of investigation, monitoring and analysis of the environment and the territory, using and integrating tools deriving from ecology, geopedology, chemistry, microbiology, hydrology, statistics, information technology, economics, law;
- carry out analyses and studies aimed at territorial planning, sustainable planning of economic activities, regulation and protection of natural resources and common goods;
- support policies to enhance ecosystem services, through the analysis of anthropogenic systems and the development of strategies for the sustainable use of resources, the territory and related activities;
- apply tools to develop projects for territorial protection, maintenance and redesign (nature-based solutions, green infrastructures) in the natural, rural, forest and urban areas;
- apply tools to diagnose ecosystem health, through environmental control and monitoring methods aimed at the reclamation and recovery of degraded ecosystems, through bioremediation techniques and nature-based solutions;
- work professionally in the related activities and in particular examine and solve planning and design problems, as well as

coordinate and manage interventions for the protection and enhancement of the territory and natural resources and landscape;

- know how to interact with public administration with reports, studies, projects, plans and programs.

Independent judgment, communication skills, learning skills

The graduate will have the ability to:

- communicate, also in public, information, ideas, problems and solutions, both in writing and orally, in a general domain and in the specific area of competence;

- work in multidisciplinary work groups to develop reports and projects;

- produce textual and graphic documents for technical and scientific communication in support of public policies;

- present data and draw up reports and reports on research topics and activities;

- manage institutional communication with a view to transparency of public action, according to the principles governing the information and communication activities of Public Administrations;

- operate autonomously, carrying out coordination functions and assuming managerial responsibilities;

- make decisions and deal with complex situations thanks to the ability to autonomously integrate own knowledge, even when faced with partial data and information;

- work in a team.

### **Profilo professionale e sbocchi occupazionali**

Specialist in public management of natural resources

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 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, to the 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.

Skills associated with the function

Graduates in Sustainable Natural Resource Management will have a strong scientific and operational preparation in disciplines concerning the protection of natural resources and the technological and economic aspects of nature-based solutions for the territory (green and blue infrastructures, ecological restoration, environmental bioremediation, protection of environmental and biodiversity matrices). They will possess the cultural tools to address the systemic analysis of the environment in all its biotic and abiotic components and their interactions. Graduates will then be able to:

- examine and solve problems of planning and management of natural resources;

- design and coordinate interventions for the protection and enhancement of the environment and the territory, both agricultural-forestry and urban;

- carry out basic and applied research and promotion and development of scientific and technological innovation for the planning, conservation and enhancement of natural resources and for sustainable development;

- evaluate natural resources and environmental impacts of economic activities through the formulation of models and the use of conceptual and methodological tools provided by economics, law and environmental planning;

- use modern technologies of investigation and monitoring of the environment and of the territory;

- carry out complex and interdisciplinary coordination and management activities.

At the end of the studies, the graduate in Sustainable Natural Resource Management will have developed skills for personal communication, multidisciplinary teamwork and judgment, on a scientific, technical, economic, human and ethical level.

The graduate will be able to use the English language, in written and oral form, with specific reference to the disciplinary lexicons.

Career opportunities

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 Authority, 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 fields 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.

The professional profile covers the following categories:

- Agronomists and foresters

- Planners, landscape architects and specialists in the recovery and conservation of the territory

- Biologists

- Botanists
- Ecologists
- Microbiologists

### **Conoscenze per l'accesso**

Students with an Italian University Degree

Applicants to this Master's degree programme are required to hold a Bachelor's degree in one of the following classes:

- L-21 Town, Regional and Environmental Planning
- L-25 Agricultural Science and Technology
- L-32 Environmental Sciences

Those holding a Bachelor's degree in other degree classes are also eligible, provided they have earned at least 30 credits (CFU) in one of the following subject areas:

Agricultural Sciences

- AGR/01 - Economy and rural appraisal
- AGR/02 - Agronomy and herbaceous crops
- AGR/03 - General arboriculture
- AGR/04 - Horticulture and floriculture
- AGR/05 - Forest settlement and forestry
- AGR/07 - Agricultural genetics
- AGR/08 - Agricultural hydraulics
- AGR/09 - Agricultural mechanics
- AGR/10 - Rural constructions and agro-forestry territory
- AGR/11 - General and applied entomology
- AGR/12 - Plant pathology
- AGR/13 - Agricultural chemistry
- AGR/14 - Pedology
- AGR/16 - Agricultural microbiology

Natural Sciences

- BIO/01 - General botany
- BIO/02 - Systematic botany
- BIO/03 - Environmental and applied botany
- BIO/04 - Plant physiology
- BIO/07 - Ecology
- BIO/13 - Applied biology
- BIO/19 General microbiology
- CHIM/01 - Analytical chemistry
- CHIM/06 - Organic chemistry
- CHIM/12 - Chemistry for the environment and for cultural heritage
- GEO/02 - Stratigraphic and sedimentological geology
- GEO/04 - Physical geography and geomorphology
- GEO/05 - Applied geology

Regional planning

- ICAR/06 - Topography and cartography
- ICAR/15 - Landscape architecture
- ICAR/20 - Urban planning and policy design
- ICAR 21 - Urban planning
- IUS/03 - Agricultural law
- IUS/09 - Institutions of public law
- IUS/14 - European Union law
- SECS-P/08 - Economics and business management

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, operating as defined in the Regolamento Didattico and in the Manifesto degli Studi. 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.

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

The B2-level requirement will be ascertained by the University Language Centre (SLAM) upon admission as follows:

- Language certificate at or above B2, obtained no more than three years earlier. For the list of language certificates recognized by the University please review: <https://www.unimi.it/en/node/39267/>. The certificate must be uploaded when submitting the online application;

- English level achieved during a Bachelor's degree programme through SLAM courses and tests. The test must have been passed within the last four years. It will be assessed administratively, without the applicant having to attach any certificates;

- Placement Test delivered by the University Language Centre (SLAM), which will take place according to the schedule posted to the website: <https://www.unimi.it/en/node/39267/>

All those who fail to submit a valid certificate or do not meet the required proficiency level will be invited to take the test through the admission procedure.

Candidates who do not sit or pass the placement test will have until 31 December 2022 to obtain and submit a recognized certificate to SLAM.

Students who do not meet the requirement by 31 December will not be admitted to the Master's degree programme and may not sit further tests.

The candidate will undergo an interview to verify his/her preparation in these dates:

- 23 September 2022 at 9 am

- 11 January 2023 at 9 am

The interview will be held at the Faculty of Agriculture, Via Celoria 2, Milan. Students not able to attend in Milan can do the interview remotely. Details will be provided to the candidates within one week of the scheduled date.

### **Struttura del corso**

Twelve ECTS are dedicated to obtain basic requirements ('alignment path'), according to the student's background.

#### **a) Alignment Courses**

- for students holding an Italian degree in the class L-25 Agricultural Sciences and Technologies, or having a similar background if graduated abroad (see Table 1)

- 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 (see Table 2)

- 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 (see Table 3)

Students graduated in a different class than L-21, L-25 or L-32 will be assigned to one of the three alignment paths during the admission interview.

#### **b) Common Courses**

After the alignment course, six courses (for a total of 36 ECTS) dedicated to fundamental issues and disciplines (see 1st Course Year)

#### **c) Personalised Courses**

Each student can then customize his / her educational path in a very personalized way to meet his/her cultural and professional interests.

The personal path consists of the following choice options:

• A first laboratory to be chosen from (see Table 4):

A.1 - Ecology and forest restoration

B.1 - Green infrastructures and nature-based solutions

C.1 - Environmental systems and anthropic impact

• A second laboratory to be chosen from (see Table 5):

A.2 - Forest management and planning

B.2 - Agricultural water management

C.2 - Environmental bioremediation

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. The first laboratory deals with environmental and ecosystem management, while the second addresses degradation and ecological restoration techniques.

The workshops with letter 'B' deal with issues related to water resources. In the first laboratory 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 second 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. The first laboratory analyzes the impacts of human activities on the environment, while the second applies bioremediation techniques to polluted sites.

• Additional 15 ECTS of courses selected by the student. Here, it is possible to choose courses offered in other master's degree courses at the University of Milano, including a third laboratory among those not yet attended.

Teaching methods:

- lessons;
- classroom exercises;
- computer exercises;
- laboratories;
- field activities.

Course duration and Language

Course duration is either for the entire year (two semesters) or for a semester only.

The courses will be delivered in English.

Study plan definition and submission for approval

During the first year, students must submit a "Study plan", with the indication of elective courses they intend to attend, and how they want to utilize the 15 ECTS of freely chosen activities. The study plan represents the official record of the degree; the list of courses must correspond to the exams passed by the student in order to grant admission to the final dissertation. To prepare the study plan, students are invited to interact with their tutor; the plan is then submitted to Collegio Didattico for approval.

The procedure and the deadline for submitting the study plan will be indicated by the Student Office on the web page: <https://www.unimi.it/en/node/122/>.

The Study plan can be changed upon request. The study plan submission period also applies to any amendments.

Exams of elective courses and optional courses can be given only if the course is listed in the approved study plan.

### **Tutorato**

The degree course provides a tutoring service which aims to guide and assist students individually along the course of their studies for all the needs related to learning and to prepare the study plan. Tutors belong to the faculty of the MSc; the assignment of the tutor takes place on the basis of the initial letter of the student's surname.

### **Prove di lingua / Informatica**

The acquisition of 3 ECTS related to additional language skills will be linked to the linguistic needs of the student:

- italian students will be directed to the study of technical English;
- international students without an Italian degree or diploma can obtain 3 credits in /Additional language skills: Italian /by proving an Italian language proficiency at level A2 within the Common European Framework of Reference for Languages (CEFR). This level can be assessed by the end of the degree course in the following ways:
  - by submitting the language certificate achieved no more than three years prior to the submission, at level A2 or higher, recognised by the University (the list of recognised language certificates can be found at: <https://www.unimi.it/en/node/349/>). The language certificate must be uploaded through the service <https://informastudenti.unimi.it/saw/ess?AUTH=SAML>, by choosing the category SLAM;
  - by an entry-level test, organised by SLAM, which can be taken at the beginning of every semester.

Students who fail to reach level A2 will have to attend a 60-hour Italian course organised by SLAM and to pass the final test during the I semester of the second year of study in order to earn 3 ECTS credits of /Additional Language Skills: Italian/.

### **Obbligo di frequenza**

Lesson attendance is strongly suggested.

### **Caratteristiche della prova finale**

The MSc in Sustainable Natural Resource Management is achieved after passing a final test which consists in the presentation and discussion of a thesis prepared by the student under the guidance of a supervisor. The supervisor can indicate a second professor or an external expert with the function of co-supervisor. The MSc thesis is a paper written in English, structured along the lines of a monograph or a scientific publication.

To be admitted to the final exam, which involves the acquisition of 24 ECTS, the student must have passed all the exams of the courses listed in the study plan.

## **ESPERIENZA DI STUDIO ALL'ESTERO NELL'AMBITO DEL PERCORSO FORMATIVO**

The University of Milan supports international mobility by providing its students with the opportunity to spend study and internship periods abroad. It is a unique chance to enrich your educational path in a new exciting environment.

The agreements entered into by the University with over 300 universities from the 27 EU member countries under the European Erasmus+ programme allow regularly enrolled students to carry out part of their studies at one of the partner universities or to undertake internships at companies, training and research centres and other organizations.

Similar international mobility opportunities are provided outside Europe, through agreements with a number of prestigious institutions.

### **Cosa offre il corso di studi**

The MSc in Sustainable Natural Resource Management offers many opportunities for study abroad, mainly through the Erasmus+ program which includes about 30 foreign universities located in the countries of the European Union. The disciplines that can be developed at the partner universities embrace all those specific to the MSc. During their stay abroad, students can follow courses to expand their scientific knowledge, or carry out internships or the degree thesis.

Subject to an agreement established before departure with the professors of the University of Milan, the mark and related credits obtained in the partner universities are recognized, thus giving students the certainty that what has been done in the host university is then positively evaluated in their curriculum. There are also other opportunities for cultural exchanges with universities that have established agreements with our university and are not part of the Erasmus system. These belong to non-community areas such as China, Japan, and Latin America.

Useful information about the campuses and courses available can be found at the following link: [https://drive.google.com/drive/folders/1-u48xSaV9eR9Vg-vU9YRT\\_DAcYccI50K](https://drive.google.com/drive/folders/1-u48xSaV9eR9Vg-vU9YRT_DAcYccI50K)

### **Modalità di partecipazione ai programmi di mobilità - mobilità Erasmus**

The students of the University of Milan can participate in mobility programmes, through a public selection procedure.

Ad hoc commissions will evaluate:

- Academic career
- the candidate's proposed study programme abroad
- his/her foreign language proficiency
- the reasons behind his/her application

Call for applications and informative meetings

The public selection for Erasmus+ mobility for study generally begins around February each year with the publication of a call for applications specifying destinations and requirements. Regarding the Erasmus+ Mobility for Traineeship, the University of Milan usually publishes two calls a year enabling students to choose a destination defined by an inter-institutional agreement or to find a traineeship position on their own.

The University organizes informative meetings to illustrate mobility opportunities and rules for participation.

Erasmus+ scholarship

The European Union grants the winners of the Erasmus+ programme selection a scholarship to contribute to their mobility costs, which may be supplemented by the University funding for disadvantaged students.

Language courses

Students who pass the selections for mobility programmes can benefit from intensive foreign language courses offered each year by the University Language Centre (SLAM).

<https://www.unimi.it/en/node/8/>

Learn more at <https://www.unimi.it/en/node/274/>

For assistance, please contact:

International Mobility Office

Via Santa Sofia 9 (second floor)

Tel. 02 503 13501-12589-13495-13502

Contacts: InformaStudenti; [mobility.out@unimi.it](mailto:mobility.out@unimi.it)

Student Desk booking through InformaStudenti

## **MODALITA' DI ACCESSO: 1° ANNO LIBERO CON VALUTAZIONE DEI REQUISITI DI ACCESSO**

### **Informazioni e modalità organizzative per immatricolazione**

Access to the MSc is free with assessment of curricular requirements and adequate personal preparation.

The admission application must be submitted online by March 15th up to October 31th, 2022. The application can be submitted both by graduates and by BSc students who will graduate by 31 December 2022.

Candidates from other universities must attach the documentation certifying the degree obtained (or to be achieved), the exams passed, the exams to pass, any language certifications.

For undergraduates and graduates of the University of Milan, this documentation will be acquired ex officio.

Detailed information is available here: <https://www.unimi.it/en/study/bachelor-and-master-study/degree-programme-enrolment/enrolment-masters-programme/open-admission-master-programmes>

**1° ANNO DI CORSO Attività formative obbligatorie**

Erogazione	Attività formativa	Modulo/Unità didattica	Cfu	Settore
1 semestre	Data management		6	INF/01
1 semestre	Hydrology		6	AGR/08
1 semestre	Natural resource economics		6	AGR/01
2 semestre	Environmental law		6	IUS/10
2 semestre	Land planning and life cycle assessment		6	AGR/10
2 semestre	Statistical methods for the environmental research		6	AGR/02
			Totale CFU obbligatori	36

**Attività a scelta****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:**

1 semestre	Ecology		6	BIO/07
1 semestre	Law of territorial government and public contracts		6	IUS/10

**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:**

1 semestre	Agricultural systems and soil science		6	AGR/02, AGR/13
1 semestre	Ecology		6	BIO/07

**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:**

1 semestre	Agricultural systems and soil science		6	AGR/02, AGR/13
1 semestre	Law of territorial government and public contracts		6	IUS/10

**Table 4****A first laboratory to be chosen from:**

2 semestre	Ecological and forest restoration (tot. cfu:15)	Forest ecology and restoration design	5	AGR/05
		Remote sensing and functional ecology	6	BIO/03, ICAR/06
		Soil dynamics in ecosystem restoration	4	AGR/14, GEO/05
2 semestre	Environmental systems and anthropic impact (tot. cfu:15) <i>Non attivato per l'a.a. 2022/2023</i>	Environmental plant physiology and microbial ecosystems	10	AGR/13, AGR/16
		Environmental chemistry	5	CHIM/06
2 semestre	Green infrastructures and nature-based solutions (tot. cfu:15) <i>Non attivato per l'a.a. 2022/2023</i>	Green infrastructures planning and design	4	AGR/10
		Stream restoration	4	AGR/08
		Applied botany and woody species in landscape design	7	AGR/03, BIO/03

**2° ANNO DI CORSO (da attivare a partire dall'a.a. 2023/24) Attività a scelta****Table 5****A second laboratory to be chosen from:**

1 semestre	Agricultural water management (tot. cfu:15)	Water resource assessment	4	AGR/08
		Economic and environmental assessment of water resource	7	AGR/01, GEO/04
		Farming system and water quality	4	AGR/10
1 semestre	Bioremediation (tot. cfu:15)	Environmental microbiology and phytoremediation	10	AGR/13, AGR/16
		Environmental chemistry	5	CHIM/06
1 semestre	Forest management and planning (tot. cfu:15)	Sustainable management of mountain forests	5	AGR/05
		Assessment and mitigation of hydrogeological risk in the mountain environment	7	AGR/08, AGR/14
		Economic and environmental assessments of forest land management	3	AGR/01

The study plan includes 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.

The activities selected to fulfil the 15 ECTS must appear in the study plan and are freely chosen students with the help of their tutor. They must then be approved by the Academic Board, which judges their consistency with the MSc.



### **Altre attività a scelta**

**Other activities: STUDENTS HAVE TO ACQUIRE AN ADDITIONAL 3 CREDITS.**

International students without an Italian degree or diploma can obtain 3 credits in /Additional language skills: Italian /by proving an Italian language proficiency at level A2 within the Common European Framework of Reference for Languages (CEFR). This level can be assessed by the end of the degree course in the following ways:

- by submitting the language certificate achieved no more than three years prior to the submission, at level A2 or higher, recognised by the University (the list of recognised language certificates can be found at: <https://www.unimi.it/en/node/349/>).
- The language certificate must be uploaded through the service <https://informastudenti.unimi.it/saw/ess?AUTH=SAML>, by choosing the category SLAM;
- by an entry-level test, organised by SLAM, which can be taken at the beginning of every semester.

Students who fail to reach level A2 will have to attend a 60-hour Italian course organised by SLAM and to pass the final test during the I semester of the second year of study in order to earn 3 ECTS credits of /Additional Language Skills: Italian/.

	Additional Language Skills: Italian (3 ECTS) <i>Only for foreign students, it replaces "Other activities"</i>		3	ND
	Other activities		3	NA

### **Attività conclusive**

	Final exam		24	NA
		Totale CFU obbligatori	24	