



UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2021/22
MASTER DEGREE
Agro-environmental Sciences (Classe LM-73)
Enrolled from 2019/20 academic year

HEADING

Degree classification - Denomination and code:	LM-73 Forestry and environment
Degree title:	Dottore Magistrale
Length of course:	2 years
Credits required for admission:	180
Total number of credits required to complete programme:	120
Years of course currently available:	1st , 2nd
Access procedures:	Open, subject to entry requirements
Course code:	G57

PERSONS/ROLES

Head of Study Programme

Prof. Luca Bechini

Tutors - Faculty

Tutor per i piani di studio:

lettera iniziale cognome studenti A-E: Prof.ssa Maria Laura Deangelis

lettera iniziale cognome studenti F-Q: Prof. Gianluca Galassi

lettera iniziale cognome studenti R-Z: Prof. Guido Sali

Degree Course website

<https://scienzeagroambientali.cdl.unimi.it/>

Phone 0250316590 Email: didattica.disaa@unimi.it

via Celoria 2 - Milano Città Studi Phone 0250316511-0250316512 Lunedì, mercoledì e venerdì dalle 10.30 alle 12.30; martedì e giovedì dalle 14 alle 16. Email: didattica.agraria@unimi.it

via Celoria 18 - Milano Città Studi Phone 0250325032 <https://www.unimi.it/it/node/360> <https://www.unimi.it/it/node/359>

CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives

The Master's Degree Course in Agro-environmental Sciences aims at forming graduates with a wide cultural and scientific background in the fields of biology, chemistry, engineering, and economy. Specific objective of the Master's Degree Course is to form a graduate endowed with the scientific and technical tools useful to operate in the field of planning and management of the rural and forest environment and landscape, able to match economic efficiency with the protection and enhancement of natural resources. The graduate in Agro-environmental Sciences will have a valuable scientific and operational preparation in the disciplines that concern the protection of natural resources and the technological and economic features of rural and forest territories; he/she will also possess the cultural tools for a systemic analysis of the environment in all its biotic and abiotic components and of their interactions. The curriculum foresees a tight integration among the different teachings in order to facilitate the development of a clear multidisciplinary vision of the problems, and the use of diversified teaching methodologies and materials. These comprehend, in addition to frontal lessons and use of the most up-to-date textbooks for the different disciplines, study of scientific papers and participation to practical laboratory exercises and in-field activities, with use of state-of-the-art tools for data collection, analysis and elaboration. The verification of learning outcomes takes place, in addition to the usual oral and written tests, by discussing project works, individually or collectively elaborated in groups of few students, with the aim of efficiently verifying the expected learning outcomes and the achievement of critical capacity.

Expected learning outcomes

The Graduate in Agro-environmental Sciences will acquire scientific and operational skills in the disciplines inherent to the preservation of natural resources and to the technological and economical aspects typical of the rural territory. He/she will also possess the cultural tools to conduct a systemic environmental analysis considering biotic and abiotic components as well as their interactions. Such professional will therefore be able to: examine and solve, by the use of advanced computational tools to represent and analyze environmental and territorial data as well as of mathematical models, problems

concerning the planning and the management of natural resources; plan and coordinate actions to preserve and valorize rural environments and territories; conduct activities of basic and applied research and of promotion and development of scientific and technological innovation aimed at planning, preserving and valorizing the natural resources and at promoting the sustainable development of the rural areas; evaluate the rural and forest resources and the environmental impact of agricultural activities through the elaboration of models exploiting also conceptual and methodological tools of economics, law and environmental planning; use the modern technologies for the study and monitoring of environment and land; conduct complex and interdisciplinary coordination and guidance activities referable to one or more of the following sectors: sustainable planning and management, eco-certification and preservation of rural and forest resources; design and manage soil protection and forest engineering works; design and manage urban and peri-urban green areas; design and manage works aimed at the amelioration, reconstitution and ecological restoration of degraded environments; develop projects for the management of protected areas and ecological territorial planning; operate in the different fields with great autonomy, carrying out coordination functions and assuming managerial responsibilities.

Professional profile and employment opportunities

The professional profile of the Graduate in Agro-environmental Sciences merges deep knowledge of chemistry, biology and physiology with that of agro-technologies and agricultural economy and engineering, so characterizing a professional able to respond to the requirement of highly-qualified professional from Administrations and Public Bodies as well as to those of enterprises and professional services. Graduates will meet career opportunities in the territorial and environmental fields, with particular regard to the planning and sustainable management of rural and forest environments and areas, environmental protection, analysis and monitoring of agro-environmental systems, planning and implementation of interventions aimed at defending and preserving soils and water resources for the restoration and conservation of the biotic and abiotic components of eco-systems, and in the different fields of agricultural engineering. In particular, thanks to the acquired skills, Graduates will find career opportunities in:

- national and regional services for the protection and development of the environment and territory (Government technical services, national and regional environmental agencies, basin authorities, regional, provincial and municipal technical services and departments, reclamation and irrigation consortia, mountain communities, consortia of mountain catchment areas);
- laboratories, professional offices, and service companies active in the fields of both environmental and territorial planning and management and environmental monitoring and recovery;
- companies operating in the field of waste management and disposal and of environmental remediation;
- companies operating in the field of construction and maintenance of green areas and of intervention for the protection soil and water resources;
- environment and territory branches of large companies;
- freelance activities in the agricultural, agroforestry, and environmental fields.

Notes

Proficiency in English at a B1 level or higher, under to the Common European Framework of Reference for Languages (CEFR), is required for admission.

The B1-level requirement will be ascertained by the University Language Centre (SLAM) upon admission as follows:

- By a language certification at or above B1, obtained no more than 3 years earlier. For the list of language certifications recognized by the University please review: <https://www.unimi.it/en/study/language-proficiency/placement-tests-and-english-courses/english-entry-tests>. The certification must be uploaded when submitting the online application;
- By the English level achieved during a Bachelor's degree programme through SLAM courses and tests. The certificates must be less than four years old, and will be assessed administratively, without the applicant having to attach any certificates;
- By the entrance test, which will be delivered by the SLAM on 22 September 2021, and on 12 November 2021, only for students who have applied for admission at a later date.

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 entrance test will have until 31 December 2021 to obtain and submit one of the recognized certifications to the SLAM.

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

In order to obtain their degree, students must be proficient in English at a B2 level. This proficiency level may be certified as follows:

- By a language certification at a B2 level or higher, as submitted during the admission procedure;
- By the entrance test (B2 level or higher);
- By a Placement Test, which is delivered by the University Language Centre (SLAM) during year I only, from October to January (B2 or higher).

All students who do not have a B2 level or higher will be required to attend a B2-level English course, which will be delivered by the SLAM, in the second semester of year I only.

Those who do not attend the course or do not pass the end-of-course test within 6 attempts must obtain a language certification by graduation.

EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM

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 and other Extra-EU 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.

Study and internships abroad

The Course of study in Agro-Environmental Sciences gives many opportunities for stages abroad mainly through the Erasmus+ programme. About 30 foreign Universities of the EU are involved in this students exchange. The areas of study which can be followed by the students abroad are almost all those included in this course of study. In general, students who make a stage abroad attend local courses or participate in research for the preparation of their thesis. The examination scores and the related UFC obtained in the partner universities are almost entirely acknowledged by our university for the curriculum studies. Other possibilities exist in terms of cultural exchange with non EU universities (in China, Japan, Latin America) not involved in the Erasmus programme. More informations at https://drive.google.com/drive/folders/1-u48xSaV9eR9Vg-vU9YRT_DAcYCci50K

How to participate in Erasmus mobility programs

How to participate in Erasmus+ mobility programmes

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 generally begins around February each year with the publication of a call for applications specifying the destinations, with the respective programme duration (from 2/3 to 12 months), requirements and online application deadline.

Every year, before the deadline for the call, the University organizes informative meetings to illustrate opportunities and rules for participation to students.

Erasmus+ scholarship

The European Union grants the winners of the Erasmus+ programme selection a scholarship to contribute to their mobility costs, which is 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.

Learn more at <https://www.unimi.it/en/international/study-abroad/studying-abroad-erasmus>

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

Student Desk booking through InformaStudenti

1st COURSE YEAR Core/compulsory courses/activities common		
Learning activity	Ects	Sector
Agro-environmental analysis and modelling	6	AGR/02
English proficiency B2 (3 ECTS)	3	ND
Environment and landscape: planning and farm management	10	AGR/10
Forest resource management	6	AGR/05
Modeling and simulation	6	ING-INF/04

Soil and environment	6	AGR/13
Statistical methodology for agricultural research	6	SECS-S/01
Sustainable animal husbandry	6	AGR/19
Territorial policy and rural development	6	AGR/01
Water resources in agro-forestal systems	8	AGR/08
Total compulsory credits		63
2nd COURSE YEAR Elective courses		
Environmental laboratory	18	(6) AGR/16, (6) CHIM/06, (6) AGR/13
Landscape laboratory	18	(6) AGR/08, (6) AGR/01, (6) BIO/03
Mountain Lab	18	(5) AGR/05, (7) AGR/08, (6) AGR/01, (7) AGR/14
Further elective courses		
Energy for Agriculture	6	AGR/10
GIS (Geographical Information System) for rural landscape	6	AGR/09
Integrated design and re-use of rural buildings	6	AGR/10
International cooperation and crop-livestock systems	6	AGR/18
Planning and realization of urban green spaces	6	AGR/03
Precision dairy farming	3	AGR/19, AGR/10
Precision irrigation	5	AGR/08
Ree Biocontrol of pathogens - Innovative, low environmental impact approaches for the control of pathogens (BASIC)	3	AGR/12
Soil bioengineering	6	AGR/08
End of course requirements		
Final exam	27	NA
Total compulsory credits		27