



UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2024/25
IN
GLOBAL ENVIRONMENT AND DEVELOPMENT (Classe LM-69)
Immatricolati dall'a.a. 2023/2024

HEADING

Degree classification - Denomination and code:	LM-69
Degree title:	Dottore Magistrale
Length of course:	2 years
Credits required for admission:	180
Total number of credits required to complete programme:	120
Course years currently available:	1st , 2nd
Access procedures:	Cap on student numbers, student selection based on entrance test
Course code:	G68

PERSONS/ROLES

Head of Study Programme

Prof. Carlo Massimo Pozzi

Tutors - Faculty

Academic guidance tutor: prof. Gian Battista Bischetti

Erasmus and international mobility tutor: prof. Matteo Crovetto

Study plan tutor: prof. Carlo Pozzi

Internship tutor: prof. Matteo Crovetto

Laboratories and other activities: prof. Luca Rapetti

Master's degree tutor: prof. Gian Battista Bischetti

Trasfer and Master's degree admission tutor: prof. Claudio Gandolfi

ECTS recognition tutor: prof. Marco Fiala

Degree Course website

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

Didactic Secretariat of the Faculty of Agricultural and Food Sciences

via Celoria 2 - 20133 Milano Tel. 0250316511 Public opening hours: Monday from 10 am to 12 am and from 2 pm to 4 pm

<https://informastudenti.unimi.it/saw/ess?AUTH=SAML>

Head of MERGED Commission (International Management Commission of the Study Programme which coordinates with the local commissions, for Italy the "Collegio didattico")

prof. Carsten Smith-Hall

International web site of the Master Degree Course

<https://merged.info>

Representative for disability services and specific learning disabilities

prof. Giulio Senes

Student registrar

via Celoria 18 - 20133 Milano Tel. 0250325032 <https://www.unimi.it/en/node/359> <https://www.unimi.it/en/node/360>

CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives

Global Environment and Development (MERGED) is an Erasmus Mundus Joint Master (<https://merged.info/>).

The course aims to create globally competitive graduates that can identify critical aspects of sustainable natural resource management for economic, environmental, institutional, and societal development in both the global south and the global north and develop sustainable, appropriate, and feasible solutions. The programme will educate high-quality digitally-competent graduates to become professionals in private and public companies, I/NGOs, government bodies, and research

institutions. Through interdisciplinary and disciplinary, multicultural real-life experiences and laboratory experiments, students will learn to identify, analyse, understand, and forecast complex systems. MERGES provides two curricula: in Agricultural Development (at the university of Milano) or in Sustainable Environmental Development (at the university of Warsaw).

The MERGED graduate with a specialization in Agricultural Development is an innovative professional figure, equipped with a solid technical-scientific culture, a broad multidisciplinary vision of the environmental and agricultural system and a high operational preparation to manage economic and productive activities related to agriculture and natural resources in a global framework and long-term sustainability. The figure can operate in international contexts, both in the North and in the South of the world.

The MERGED professional figure in Sustainable Environmental Development is equipped with the ability to interpret the principles and processes that inform sustainable development on a global level from an economic, sociological, and legal point of view.

During the first year at the University of Copenhagen the student acquires skills also through practical and interdisciplinary courses, which include training visits in other continents. During the second year at the university of Milano the subjects offered are dealing with interdisciplinary disciplines of natural, environmental, and territorial resource management; disciplines of animal production; engineering disciplines and biosystem design; disciplines of the sustainability of crop production. The student refines his/her knowledge in the field of sustainability for agricultural systems, in particular by acquiring: a) knowledge with a strong applicative nature, based on case studies in real scenarios, on a global scale; b) skills with a technical and quantitative slant, based on scientific knowledge and acquisitions and on the applications of technological innovations. During the second year at the university of Warsaw, the students acquire a socio-economic and legal perspective on environmental issues from a global perspective. The aim is to allow the student to master the tools to be used in the analysis of the sustainability of the global environmental development.

As a consequence of the knowledge and skills acquired, the graduates in Global Environment and development:

- have a solid technical and cultural preparation, a multidisciplinary and global vision, and a good command of the scientific methods of the sciences of environmental and agricultural sustainability
- have in-depth knowledge of the qualitative criteria and quantitative methods necessary to plan, evaluate, and manage agricultural production systems and processes in a sustainable way, integrating the technical, economic, regulatory and environmental aspects, in a global context
- know how to formulate and apply quantitative assessments using conceptual models and IT tools, to animal and plant production and to choose the most suitable and sustainable technologies
- know how to manage the global climate change challenges to the management of water resources
- know how to manage the technical and economic quality of products and processed products in the plant and animal production chains, to be able to operate in support of regulatory policies with governmental and non-governmental bodies, and private companies.

Expected learning outcomes

Knowledge and understanding

Graduates in Global Environment and Development can:

- understand the interdisciplinary nature of the interrelationships of complex agri-environmental systems and the role of natural resources within them, with a global perspective
- know the main socio-scientific theories and debates on the management of development in a perspective of environmental sustainability
- know the planning, conservation and enhancement of agricultural environmental resources
- understand the crucial aspects of operating at the intersection between environment and development
- understand the basis of the interdisciplinary and intercultural approach to transversal research between natural and social sciences
- understand the challenges related to the production and international trade of primary goods.

The graduates in the Agricultural Development path - in addition to the general competence profile - acquire knowledge and understanding about:

- the technical tools to support the management and regulation policies of the agro-environment and its resources (water, soils, forests, biodiversity, ecosystems, etc.) in the context of human activities
- the basis of the interdisciplinary approach to the study of agricultural (and more generally environmental) development and the sustainability of agricultural production
- natural science approaches to describe and characterize agricultural and ecological systems and analyse key aspects in relation to productivity, resilience, and sustainability
- planning and implementing agricultural interventions in a professional capacity in private companies, government bodies, non-governmental organizations, research institutions, or development agencies.

The graduates in the Sustainable Environmental Development acquire knowledge and understanding about:

- social science theories and concepts related to analysing and understanding challenges at the nexus of environment and development at micro and macro levels
- the theoretical basis of qualitative and quantitative data collection methodology, including interviews, questionnaires, surveys, and rapid appraisal techniques.

Ability to apply knowledge and understanding

The graduates of the master in Global Environment and Development are able to:

- apply theoretical methods to actual field situations
- analyze the validity and reliability of different types of data deriving from the natural and social sciences applied to global development
- effectively acquire, integrate, update, and reformulate data and knowledge
- analyze and interpret different types of data to generate scientifically consistent conclusions.

The graduates in the Agricultural Development path - in addition to the general competence profile - acquire ability in applying knowledge and understanding to:

- research planning, data collection, and using a range of field methods and data analysis techniques
- link and harmonise agricultural activities with environmental conditions
- critically identify sustainability issues in relation to agricultural development

The graduates in the Sustainable Environmental Development acquire ability in applying knowledge and understanding to the application of principles, theories, and frameworks to case studies and critically engage in research and debates related to environmental resource governance and sustainable development.

Judgment autonomy

- understand the founding values of MERGED, relating to the development of autonomous scientific curiosity, maintaining one's own deontological and ethical integrity, mental openness and disposition for dialogue and collegial interaction.

Communication skills

The graduates of the master in Global Environment and Development are able to:

- identify, analyze a scientific problem of a complex nature, and communicate ideas and information in a clear and concise way to a wide audience, of experts and non-experts, at multiple levels, using modern and appropriate communication methods, using the English language
- work in interdisciplinary and multicultural teams, plan and organize activities collaboratively, assigning clear objectives, priorities, and responsibilities, carrying out management coordination functions
- consult authoritative and international sources of technical and scientific information.

Learning capacity

The graduates of the master in Global Environment and Development:

- learn in an individual and integrated way the themes proposed in different disciplines
- display independence and integrity, as well as awareness of ethical and moral questions related to agriculture and ecology and take these into account when working in different cultural settings
- continuously acquire new skills and knowledge when working in complex field settings as well as in interdisciplinary teams in intercultural environments
- update the skills by consulting technical and scientific international sources and databases.

Professional profile and employment opportunities

Expert, manager and consultant of policies and rural and environmental development in private companies, public administration and public bodies with international interests, and international organizations (governmental and non-governmental) in the agro-food sector.

In the private sector, the graduate can take on the organization, evaluation and management of the interaction between agri-environmental activities and systems.

In the public sector, the graduate supports administrations on environmental and territorial policies, especially on issues related to sustainable husbandry and agricultural engineering. The international bodies are a preferred career opportunity provider.

MERGED graduates can disseminate, within institutions, the principles of environmental sustainability, promote a culture oriented towards safety and the protection of the agricultural environment, also through the awareness of public opinion.

Skills associated with the function

Those who complete the MERGED study path are able to carry out analyses, evaluations and monitoring of natural, territorial and environmental resources, carrying out environmental impact studies with tools deriving from social sciences, economics, law, agricultural business management and environmental planning. These tools are made available through the first-year interdisciplinary courses. The skills allow to operate in interdisciplinary and diversified contexts (such as those outlined by the European Green Deal and similar policies) and/or continue the studies with further masters and courses. Those who complete MERGED can contribute to: implementing and certifying environmental management systems in rural areas; carry out interventions on the production of goods and services to improve environmental quality; plan and implement interventions for the prevention of environmental risks, increasing safety, especially in agriculture.

The professional trained by MERGED has a holistic vision and can synthesize complex ideas and concepts deriving from the analysis of the agricultural reality at a global level.

Employment opportunities

The skills acquired allow to work in companies and organizations that operate - even globally - in the green economy and bioeconomy; in professional studies dealing with territorial analyses, agricultural environmental impact assessment, resource management in rural environments. Those who complete the MERGED study cycle find employment in the public administration and in local public bodies; in supranational organizations; in universities or research institutes (in Italy, such as CNR, ENEA, CREA, 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). Furthermore, they can work at NGOs globally, where they are able to understand and design the development of agricultural systems even under conditions of climate change.

The master's degrees of the LM-69 class allow to obtain the qualification for the profession of doctor of agronomy which can be accessed after a qualifying exam.

Pre-requisites for admission

Requirements and knowledge required for access

Admission to MERGED requires possession of a three-year degree, or other educational qualification recognized as equivalent, after verification by the MERGED Commission of the curricular requirements, based on the documentation produced by the candidate.

English is the official language of MERGED. Level C1 is required by UCPH where the student enrolls. English knowledge should be documented as follows:

- holding a full degree (minimum 2 years of fulltime studies) in English (i.e. a secondary school diploma, Bachelor's degree or Master's degree from USA, Canada, Australia, New Zealand, UK or Ireland) exempts the candidate from the language requirement

- if not exempted, the candidate should provide an English language test:

IELTS Academic (6.5 overall test score). Only the overall score will be considered

TOEFL iBT (83), TOEFL iBT paper edition or TOEFL iBT Home Edition

Cambridge Advanced English or Cambridge English: Proficiency (CPE) passed at level C1 or C2.

MERGED is an international course that can be accessed by students who have completed three-year degree courses from different university systems. The range of disciplines is wide because the nature of the CdL is strongly interdisciplinary, and its teaching capacity depends on the presence of students with various backgrounds. Furthermore, students can undertake two paths with distinct characteristics, and which benefit from different starting skills.

For students coming from foreign universities, the following disciplinary areas are considered eligible: Agriculture, Agronomy, Agrobiology, Agricultural Economics, Forestry, Animal Science, Biochemistry, Biology, Biotechnology, Food and Nutrition, Food Science, Geography, Geology, Geoinformatics, Landscape Architecture, Natural Resources, Anthropology, Psychology, Sociology, Development Studies, Rural Development, Economics, Interdisciplinary Economic-managerial studies, Environmental Science, Natural Science.

For graduates from Italian universities, the following degree classes are considered eligible: L-2 (Biotechnology), L-13 (Biological Sciences), L-18 (Economics and Business Management), L- 21 (Sciences of territorial, urban, landscape and environmental planning), L-25 (Agricultural and forestry sciences and technologies), L-26 (Agri-food sciences and technologies), L-32 (Sciences and technologies for the environment and nature), L-36 (Political sciences and international relations), L-37 (Social sciences for cooperation, development and peace), L-38 (Zootechnical sciences and animal production technologies). Students from different Italian degrees can access if they have acquired at least 60 credits in the following disciplinary scientific sector, grouped by affinity:

Disciplines of engineering applied to agriculture and the environment (at least 14 credits)

AGR/08 Idraulica agraria

AGR/09 Meccanica agraria

AGR/10 Costruzioni rurali

ING-IND/11 Fisica tecnica ambientale

ING-IND/06 Fluidodinamica

Disciplines of agricultural production (at least 14 credits)

AGR/02 Agronomia e coltivazioni erbacee

AGR/03 Arboricoltura generale e coltivazioni arboree

AGR/04 Orticoltura e floricoltura

AGR/05 Assestamento forestale e selvicoltura

AGR/12 Patologia vegetale

AGR/19 Zootecnica speciale

AGR/20 Zoocoltura

Disciplines of fertility, conservation and soil study (at least 10 ECTS)

AGR/13 Chimica agraria

AGR/14 Pedologia

BIO/04 Fisiologia vegetale

GEO/05 Geologia applicata

Economics-management and data analysis disciplines (at least 10 credits)

AGR/01 Economia ed estimo rurale

SECS-S/01 Statistica

SECS-S/02 Statistica per la ricerca sperimentale

SECS-S/03 Statistica economica

SECS-S/05 Statistica sociale

SPS/10 Sociologia dell'ambiente e del territorio

Biological, chemical and physical disciplines (at least 6 ECTS)

BIO/01 Biologia molecolare

BIO/07 Ecologia
BIO/08 Antropologia
BIO/13 Biologia applicata
FIS/07 Fisica applicata
CHIM/12 Chimica dell'ambiente e dei beni culturali
Disciplines of genetic improvement (at least 6 credits)
AGR/07 Genetica agraria
AGR/17 Zootecnica generale e miglioramento genetico

English is the official language of MERGED and prior to enrolment, knowledge of the English language equal to level C1 of the Common European Framework of Reference or equivalent is required. Those in possession of a qualification obtained abroad, recognized as suitable, can also access, provided they demonstrate that they possess the necessary skills to profitably follow their studies. The verification of personal preparation will take place at the same time as the selection by an international panel of the Course, the Commission, which is responsible for this evaluation.

The requirements specifically requested by UW are listed in the MERGED website and in the UW website (<https://merged.info/index.php/application-procedure/>).

The course has limited access and the number of places available for enrollment in the first year for each cohort is 40. Access to the course is regulated by the evaluation - by an international panel of the course (Commission) - of documentation including the academic curriculum. A motivation letter and references will contribute to better calibrate the didactic compatibility of the student with MERGED.

Programme structure

The MERGED Programme comprises a first year (60 ECTS) at the University of Copenhagen (UCPH) followed by a second year of study (60 ECTS) at either the University of Milano (UMIL) or the University of Warsaw (UW). Student' admission occurs at UCPH, when a study plan is submitted to the Commission, indicating the chosen line of specialization: the Agricultural Development at UMIL or the Sustainable Environmental Development at UW.

The first year at UCPH includes: compulsory interdisciplinary teachings (30 ECTS), administered to all students, regardless of second-year mobility track; specialisation teachings (30 ECTS) for the track leading to Warsaw – emphasizing social sciences in relation to sustainable environmental development; or specialisation teachings (30 ECTS) for the track leading to Milano – emphasizing agricultural sciences in relation to agri-food system development. Teachings are administered in four blocks (each of nine weeks; two blocks can be considered equivalent to a semester) with a standard teaching size of 7.5 ECTS. Courses are offered by three departments: Food and Resource Economics; Plant and Environmental Sciences; and Geosciences and Natural Resource Management.

The teachings offered by each line of specialization are either compulsory or elective.

During the second year at UMIL, 19 ECTS are administered through compulsory teachings and 14 ECTS through elective teachings. The student is supported by the tutor in composing the study plan.

The same ECTS structure is followed by UW.

The procedure and the deadline for submitting the study plan will be indicated by the MERGED Commission on the web page: <https://merged.info/>. The plan is then submitted to the Collegio Didattico and to the Commission for approval.

Teaching methods:

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

Course duration and Language:

- Courses at UCPH last for 9 weeks (courses of 1 module) or 18 weeks (bi-modular courses). Two modules are roughly one semester.
- Courses at UMIL and UW are semestral
- Courses are delivered in English.

At the enrollment, students must submit a study plan, indicating the elective courses they intend to attend, and how they want to utilize the 14 ECTS for elective activities. The study plan is integrated into the Student' Portfolio, under the guidance of the tutor.

Tutoring

MERGED provides a tutoring service, at each member university, which aims to guide and assist students individually along the course of their studies for all learning needs and the preparation of the study plan.

Language test / computer literacy test

Proficiency in the English language is verified as follows: - possession of a university degree (for a minimum of two years full-time) in English (i.e., a secondary school diploma, bachelor's or master's degree from the United States, Canada, Australia, New Zealand, UK or Ireland) exempts the candidate from the language requirement. If not exempt, the candidate will have to take an English language test:

- IELTS Academic (overall test score 6.5). Only the overall score will be considered.
- TOEFL iBT (83), TOEFL iBT Paper Edition or TOEFL iBT Home Edition.

– Cambridge Advanced English or Cambridge English: Proficiency (CPE) passed at level C1 or C2.

To obtain the degree, those who do not hold an Italian high school diploma or bachelor's degree must demonstrate proficiency in Italian at the A2 or higher level per the Common European Framework of Reference for Languages (CEFR). This level must be demonstrated prior to completing the course programme in one of the following ways:

- by submitting a certificate of A2 or higher level issued no more than three years prior to the date of submission. You will find the list of language certificates recognized by the University at: <https://www.unimi.it/en/node/349>). The language certificate must be submitted to the University Language Centre (SLAM) via the Language Test category of the InformaStudenti service: <https://informastudenti.unimi.it/saw/ess?AUTH=SAML>;

- via a entry-level test administrated by SLAM that can only be taken only once and is compulsory for all students who do not have a valid language certificate.

Those who fail to reach A2 level will have to attend one or more than one 60-hour Italian course(s) geared to their level.

Those who do not take the entry-level test or fail to pass the end-of-course test after six attempts will have to obtain language certification privately in order to earn the 3 credits of Additional language skills: Italian.

Compulsory attendance

Lesson attendance is strongly suggested.

Internship criteria

The internship is compulsory, for 27 ECTS. The international students willing to take the Italian language course (3 ECTS) must produce a final internship and exam for a total of 24 ECTS.

Degree programme final exam

The final exam is the presentation and discussion of the final thesis, in English, at the University where the second year is completed. The topic is elaborated by the student under the guidance of a supervisor, structured along the lines of a scientific publication and based on what is described in the MERGED guidelines, available at <https://merged.info/>. To be admitted to the final test, the student must have obtained all the credits required except for those reserved for the final test itself. The subject of the final exam is the presentation of the activity carried out during the internship, done at the partner universities or at the Associate Partners. The final thesis can be carried out at public or private body that conducts an activity of interest for MERGED. In this, the student is helped by the MERGED secretariat and the tutor; the student agrees on the project with the thesis tutor and presents a summary description of the project. The MERGED Commission evaluates the project and assigns an internal supervisor. The student can then follow the procedures of each participating university (in Milan, he registers with the secretariat of the Academic Board and communicates the data relating to the thesis, using a computerized procedure). At the end of this procedure, the MERGED student is officially entitled to undertake the thesis work.

The presentation occurs in front of a commission of at least three professors, usually at least one full professor, including the supervisor of the thesis. The final mark is based on the weighted average of the marks obtained. The conversion of the marks obtained at the three universities is as follows:

Excellent: UCPH = 12; UMIL = 30 e lode; UW = 5!; ECTS =A

Very good/merit: UCPH=10; UMIL=30; UW=4,5-5; ECTS=B

Good: UCPH=7; UMIL=27; UW=4; ECTS=C

Satisfactory: UCPH=4; UMIL=24; UW=3,5; ECTS=D

Pass: UCPH=2; UMIL=18; UW=3; ECTS=E

Fail: UCPH=-3-00; UMIL=<18; UW=2; ECTS=F/FX

EXPERIENCE OF STUDY ABROAD AS PART OF THE DEGREE 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 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

MERGED is a master based on international mobility, as it requires the student to complete the first year at the university of Copenhagen and the second year either at the university of Milano or at the university of Warsaw. The thesis work can be completed at a foreign university.

Competitive fellowships are available from ERASMUS MUNDUS program.

The participation costs for EU (Erasmus+ Programme Country) students for the two-year MERGED programme are set at euro 0/year.

For the two-year edition 2023-2024/2024-2025, the participation costs for Non-EU (Erasmus+ Partner Country) students are set at euro 9,000/year.

Students selected for an Erasmus Mundus Scholarship will automatically be granted a tuition waiver. Student with scholarship will be granted: Full coverage of participation costs, consisting of tuition fee, tutoring fee, and insurance. The

fellowship includes the following costs: enrolment; registration; access to mandatory and elective modules; the optional language courses to be taken locally and all other participation costs for curriculum activities (excursions, fieldwork, etc.).

How to participate in Erasmus mobility programs

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

Student Desk booking through InformaStudenti

ADMISSION CRITERIA: 1ST YEAR CAP ON STUDENT, STUDENT SELECTION BASED ON ENTRANCE TEST

Application and enrolment information and procedures

The course is open to national and international students, including non-EU students. All information on how to access is indicated in the call for applications published on the MERGED website (<https://merged.info/index.php/application-procedure/>).

Graduates from international universities that are not members of the European system can also access, following approval by the Commission. Candidates who do not meet the specific curricular requirements can acquire them by enrolling in individual courses offered by UNIMI, on the recommendation of the MERGED Commission or the Italian MERGED Collegio Didattico. MERGED provides competitive scholarships by the ERASMUS+ programme. Approximately twenty students from each cohort can obtain the competitive scholarships.

Number of places assigned

40

1st COURSE YEAR Core/compulsory courses/activities				
Scheduling	Learning activity	Module/teaching unit	Ects	Sector
1 semester	Global challenges in environment and development		8	(3) AGR/02, (3) AGR/04, (2) AGR/03
1 semester	Quantitative and qualitative methods in environment and development		7	AGR/01
2 semester	Practicing Interdisciplinarity: field research on the environment		15	(5) AGR/02, (5) AGR/04, (5) AGR/03
Total number of compulsory credits/ects			30	
Elective courses				
1 year - elective teachings at University of Copenhagen (UCPH) for the mobility track AGRICULTURAL DEVELOPMENT - University of Milan (UMIL): choose 30 ECTS				
year	Entrepreneurship and innovation		7	AGR/01
1 semester	Advanced Crop Production		8	AGR/02
1 semester	Agroforestry		8	AGR/03
1 semester	Applied Insect Ecology and Biological Control		7	AGR/12
1 semester	Applied statistics		7	AGR/02

1 semester	Climate change and land use		7	AGR/02
1 semester	Climate Management in Plant Production and Research		8	AGR/02
1 semester	Plant Nutrition and Soil Fertility		8	AGR/13
1 semester	Tropical Crop Production		7	AGR/02
2 semester	Agricultural value chains in developing countries		7	AGR/01
2 semester	Environmental impact assessment		8	AGR/02
2 semester	Global environmental governance		7	AGR/01
2 semester	Land use and environmental modelling		7	AGR/02
2 semester	Plant ecophysiology in a changing climate		7	AGR/13
2 semester	Plant genome editing and selection		7	AGR/07
2 semester	Tropical forest restoration		7	AGR/02

2nd COURSE YEAR Core/compulsory courses/activities

Scheduling	Learning activity	Module/teaching unit	Ects	Sector
	Practical/experimental internship		17	NN
1 semester	Laboratory in sustainability of agricultural mechanization		6	AGR/09
1 semester	Laboratory in sustainability of livestock systems		7	AGR/19
1 semester	Laboratory in sustainability of water management		6	AGR/08
Total number of compulsory credits/ects			36	

Elective courses

II year - elective teachings at University of Milan (UMIL) for the mobility track AGRICULTURAL DEVELOPMENT: choose 6 ECTS

1 semester	Agricultural systems and soil science		6	AGR/02
1 semester	Bioeconomy: management, assessment and intellectual property		6	AGR/01
1 semester	Natural resource economics		6	AGR/01
2 semester	Environmental plant biotechnology		6	AGR/13
2 semester	International cooperation and crop-livestock systems		6	AGR/18
2 semester	Land planning and life cycle assessment		6	AGR/10
2 semester	Plants as biofactories		6	AGR/07
2 semester	Statistical methods for the environmental research		6	AGR/02

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This level must be demonstrated prior to completing the course programme in one of the following ways:

- by submitting a certificate of A2 or higher level issued no more than three years prior to the date of submission. You will find the list of language certificates recognized by the University at: <https://www.unimi.it/en/node/349/>). The language certificate must be submitted to the University Language Centre (SLAM) via the Language Test category of the InformaStudenti service: [https://informastudenti.unimi.it/saw/ess?AUTH=SAML](https://informastudenti.unimi.it/saw/ess?AUTH=SAML;);

- via a entry-level test administrated by SLAM that can only be taken only once.

Those who fail to reach A2 level will have to attend a 60-hour Italian course geared to their level.

Those who do not take the entry-level test or fail to pass the end-of-course test after six attempts will have to obtain language certification privately in order to earn the 3 credits of Additional language skills: Italian.

Italian students must acquire an additional 3 credits in activities dedicated to thesis work.

	Additional internship		3	NN
	Additional Language Skills: Italian (3 ECTS)		3	NN

STUDENTS HAVE TO CHOOSE FREE-CHOICE COURSES FOR 8 ECTS.

A further 8 credits derive from free-choice courses, including 3 ECTS from the intra-semester workshop. The workshop is a strongly suggested, EU funded, interdisciplinary activity for all students, i.e. students from the university of Milano and from the university of Warsaw. The teaching tutors support students in selecting the elective courses.

	MERGED intra-semester workshop		3	NN
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End of course requirements

	Final exam		7	NN
Total number of compulsory credits/ects			7	