# UNIVERSITA' DEGLI STUDI DI MILANO
# PROGRAMME DESCRIPTION - ACADEMIC YEAR 2026/27
# IN
# ENVIRONMENTAL CHANGE AND GLOBAL SUSTAINABILITY
# (Classe LM-75 R)
# Immatricolati nell'a.a. 2026/2027

## *HEADING*

| | |
|---|---|
| **Degree classification - Denomination and code:** | LM-75 R |
| **Degree title:** | Dottore Magistrale |
| **Curricula currently available:** | ENVIRONMENTAL SYSTEMS: MANAGEMENT AND SUSTAINABILITY / TECHNOLOGICAL PROCESSES AND ENVIRONMENTAL SUSTAINABILITY |
| **Length of course:** | 2 years |
| **Credits required for admission:** | 180 |
| **Total number of credits required to complete programme:** | 120 |
| **Course years currently available:** | 1st |
| **Access procedures:** | open, subject to entry requirements |
| **Course code:** | FBO |

## *PERSONS/ROLES*

**Head of Study Programme**

prof. Roberto Confalonieri

**Tutors - Faculty**

Dott.ssa Elisa De Marchi - Erasmus and International mobility tutor
Prof. Giangiacomo Beretta - Academic guidance tutor and Study plan tutor
Prof. Daniele Curzi - Academic guidance tutor and Study plan tutor
Prof. Caterina La Porta - Academic guidance tutor and Study plan tutor
Prof. Stefano Trasatti - Internship tutor

**Degree Course website**

https://ecgs.cdl.unimi.it/en

**ECGS Secretariat**

Milan - Via Celoria, 2, 2nd floor Contact us via InformaStudenti https://www.unimi.it/en/study/student-services/welcome-desk-informastudenti

**International Students Office - Welcome Desk**

Milan - Via S. Sofia, 9/1 https://www.unimi.it/en/study/student-services/welcome-desk-informastudenti

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**Representative for Disabled and SLD students**

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**Student administrative office**

Milan - Via Celoria, 18 Tel. +39 02503 25032 https://www.unimi.it/it/node/360 https://www.unimi.it/it/node/359

## *CHARACTERISTICS OF DEGREE PROGRAMME*

**General and specific learning objectives**

Environmental change plays a central role in modern societies, to the point that a sustainable management of the environment currently represents one of the most important open challenges for humanity. Addressing this challenge requires a multidisciplinary approach that overcomes the usual boundaries of scientific disciplines. In this context, the Master program in Environmental Change and Global Sustainability (ECGS) provides advanced expertise in the hard- and

life-science components of environmental studies as well as in their economic- and social-science components. The general goal is to train students to tackle environmental change and sustainability in a multidisciplinary perspective. Students will therefore be provided with both a solid knowledge of the dynamics of the different components of the environment and a deep understanding of the tools required to promote its sustainable management and protection.

The Master degree in Environmental Change and Global Sustainability represents a novelty in the Italian university system, not only for its marked multidisciplinary approach, but also for being taught entirely in English.

**Expected learning outcomes**

In the spirit of harmonization of education within the European Union, graduates from this Master program are expected to achieve the following standards according to the so-called Dublin Descriptors:

A. Knowledge and understanding

Graduates will gain advanced theoretical knowledge and expertise in the following fields: Mathematics and Statistics; Chemistry, Physics, Earth Sciences and Engineering; Life Sciences; Economics and the Social Sciences. As to Mathematics and Statistics, the courses offered include: i) Quantitative Methods; ii) Statistical Methods in Environmental Studies. These courses will strengthen the students familiarity with this subject-area, providing them with knowledge and skills that will help them to understand the mathematical and statistical methods which are used in many of the courses of the Master program. Moreover, they will allow students to get acquainted with many software packages that are currently used in environmental sciences.

As to Chemistry, Physics, Earth Sciences and Engineering, the courses offered include: i) Chemistry of Natural Processes and Technologies for the Environment; ii) Geodiversity: Theory and Applications; iii) Sedimentary successions and their natural resources for the energy transition; iv) Climate Change: Impact and Adaptation; v) Georesources and Sustainability; vi) Environmental Geochemistry; vii) Recycle and life cycle assessment (LCA) of products and processes. The knowledge and skills acquired in this area range from environmental chemistry to environmental physics; from the many aspects of the earth sciences that are relevant to the environmental issue to a number of engineering topics that are useful for a better management of the environment. The knowledge and skills acquired in this area will be very important to allow students to face the environmental issue with a quantitative approach. As to Life Sciences, the courses offered include: i) Biodiversity Dynamics and Conservation; ii) Approaches to the Study of Ecological Systems; iii) Climate Change: Impact and Adaptation; iv) Economic Botany and Zoology; v) Ecosystem Functioning and Services; vi) Bioresource and Pollution Control Technology; vii) Waste Management and Sustainability; viii) Food Industry Design, Technology and Innovation; ix) Multilevel Effects of Environmental Contamination; x) Methods in Ecotoxicology; xi) Environmental Change and Public Health. The knowledge and skills acquired in this area will first provide students an advanced understanding of:

- the dynamics regulating biodiversity and the problems connected to its conservation;
- the dynamics regulating ecological systems and the services they can provide.

Then advanced knowledge and understanding of multilevel effects of environmental contamination will be provided, ranging from the cellular scale to living beings and ecosystems, with particular emphasis on adverse effect on humans. Moreover, advanced knowledge and understanding of the economic relevance of plants and animals in a quickly changing environmental context will be provided.

Finally, students will get acquainted with several technologies relevant for environmental protection and sustainable development.

As to Economics and the Social Sciences, the courses offered include: i) Environmental Economics and Policy; ii) Statistical Methods in Environmental Studies; iii) Agricultural and Natural Resource Economics and Policy; iv) Applied Environmental and Resource Economics; v) Sustainable Development; vi) Environmental Law; vii) Green Procurement; viii) Sustainability Accounting and Management.

The knowledge and skills acquired in this area will first provide students an advanced understanding of:

- the principles of environmental economics, with a focus on policy applications;
- the principles underlying the determination of the economic value of agricultural and natural resources and the models employable for evaluating the environmental impact of economic activities and assessing the effectiveness of adaptation and mitigation policies.

Then advanced knowledge and understanding of sustainable development will be provided and students will be trained to evaluate sustainability at firm level and to plan the introduction and use of sustainable materials and processes. Finally, students will get acquainted with Environmental Law that will be examined at both a national and an international level.

B. Applying knowledge and understanding

Graduates will be able to apply the knowledge and skills acquired in the Master program to:

- properly adopt the scientific method and apply it to analyse, control and manage complex environmental problems;
- set up models, make use of quantitative tools and develop appropriate methods of analysis to investigate and understand complex environmental contexts and to propose solutions for their sustainable management;
- face all topics related to environmental protection as well as to environmental monitoring and management taking into account the issue of sustainability and considering the ethical implications of activities affecting the environment; - consider the different spatial scales related to environmental issue, ranging from the local level to the global scale; - set up and manage initiatives linked to environmental monitoring, control and remediation in every social and economic context;
- set up environmental impact studies as well as strategic environmental assessments and environmental risk assessments; - contribute to plan climate change mitigation and adaption initiatives;

- promote sustainability and contribute to strengthen social awareness on environmental issues.

C. Making judgments

The Master program will grant its graduates the ability to make judgments and to critically investigate the effects and effectiveness of the actions and decisions related to the environment, including their ethical implications. The multidisciplinary approach of this program is designed to foster the development of independent judgment and critical thinking capabilities by offering students the opportunity to compare methodological approaches in different disciplines.

D. Communication Skills

ECGS graduates will be able to effectually present and communicate the results of their work (projects, reports, documents, analytical studies, research papers, etc.) within companies and institutional bodies, at both a national and an international level. They will be able to state and defend their positions and opinions and to communicate clearly and effectively in both written and oral forms, as well as to set up cooperative relationships and collaborative work within groups. The ability to competently communicate in the workplace is primarily gained through the presentation and discussion of case studies, a practice that is compulsory for several courses and during the final dissertation.

E. Learning skills

ECGS graduates will learn how to develop and improve their learning skills through the access to and the consultation of the scientific literature, databases and other online information, and by analysing data using econometric and statistical tools. The Master degree in Environmental Change and Global Sustainability also provides its students with the methodological skills and the knowledge foundations that make it possible for graduates to continue their studies in doctoral programs. Master students will also have the opportunity to attend the other activities organised by the Department of Environmental Science and Policy, such as applied laboratories, seminars, and workshops, so as to improve their ability to understand scientific challenges and develop new topics of research.

**Professional profile and employment opportunities**

The main peculiar quality of ECGS graduates is their ability to tackle environmental change and sustainability in a multidisciplinary perspective. This ability benefits of advanced expertise in the hard- and life-science components of environmental studies as well as in their economic- and social-science components. Particular attention is paid to provide graduates with conceptual and technical tools able to support a quantitative approach in the analysis of environmental and sustainability issues. In this context, five professional profiles ECGS graduates can achieve are listed below.

1. Environmental manager in agro-food, energy and green economy companies as well as in other companies in the industrial and service sectors

Function in a working environment

This professional profile has the skills needed to effectively manage, in companies, environmental issues from the scientific, technical, administrative and legal points of view.

Career opportunities

Career opportunities will be possible in private and public companies, e.g., in the energy sector, in the green economy, in the agri-food, and in other branches of the industry and services, as well as in the secondary school.

2. Environmental specialist in the public administration as well as in local governments

Function in a working environment

Designing and managing activities dealing with environmental analysis, monitoring and evaluation.

Career opportunities

Environmental officer in public administration and local governments (e.g., municipalities, provinces, regions, natural parks and protected areas), teacher in the secondary school.

3. Environmental specialist in supra and international bodies as well as in national and international non-governmental organizations

Function in a working environment

Planning and managing activities involved with sustainable development; developing strategies at multiple scales to protect environment and natural resources.

Career opportunities

Career opportunities will be possible in supra and international bodies and in non-governmental organizations, as well as in the secondary school.

4. Specialist in environmental impact studies and strategic environmental assessments

Function in a working environment

Environmental analysis targeting the evaluation of environmental quality and impact; facing and solving environmental problems at local, regional and national scales.

Career opportunities

Private and public bodies involved with environmental issues (e.g., ARPA, institutes in charge for environmental protection, municipalities, provinces, regions), institutes for the scientific research applied to the environment and natural resources, professional studies involve with landscape analysis, impact evaluation, economics of natural resources; teaching in the secondary school.

5. Specialist in environmental analysis and monitoring

Function in a working environment

Analyzing and evaluating local and regional environmental problems (e.g., pollution and related impacts); environmental

and natural resource monitoring; identifying and applying innovative solutions to solve local and regional environmental problems.
Career opportunities
Professional studies and public research bodies involved with environmental analysis and monitoring; teaching in the secondary school.

Further employment opportunities of ECGS graduates concern research positions at universities and research institutions as well as teaching at the secondary school level.

**Pre-requisites for admission**

Eligibility to the Master program in Environmental Change and Global Sustainability presupposes to possess suitable curricular qualifications and to have an adequate personal preparation, to be verified - if needed - by means of an interview.
As to the curricular qualifications, the ECGS program can be accessed by graduates holding an Italian three-year laurea (BA) degree (ex D.M. 270/2004 or ex D.M. 509/1999) in either the class L-32 Scienze per l'ambiente e la natura (ex D.M. 270/2004) or the class L-27 Scienze e tecnologie per l'ambiente e la natura (ex D.M 509/1999). The ECGS programme can also be accessed by graduates holding an Italian three-year laurea (BA) degree, obtained in classes different from the above-mentioned ones, provided they have earned at least 45 ECTS (European Credit Transfer System) credits for having attended courses in the scientific-disciplinary sectors belonging to at least two of the following sets, of which at least 12 in the scientific-disciplinary sectors belonging to the first set and at least 12 in the scientific-disciplinary sectors belonging to the second set or the third set.
1. computer science, mathematics, and statistics (INF/01, MAT/01-/09, SECS-S/01, SECS-S/06);
2. chemistry, physics and Earth sciences (CHIM/01-/03, CHIM/06, CHIM/12, FIS/01, FIS/06-/07, GEO/01-/02, GEO/04-/05, GEO/10-/12);
3. life sciences (AGR/02-/03, AGR/05, AGR/08-/10, AGR/13, AGR/15, BIO/01-/07, BIO/09-/13);
4. economic and social sciences (AGR/01, ING-IND/35, IUS/01, IUS/04, IUS/09, IUS/13, SECS-P/01-/02, SPS/04, SPS/07, SPS/10).

The same criteria are applied also to candidates with foreign qualifications obtained from international Universities, in case the scientific-disciplinary sectors and the related number of credits are clearly identifiable. In case of problems with the identification, the career of the candidate will be evaluated by a dedicated committee appointed by the ECGS program Council.

Moreover, in all the above cases, knowledge of the English language is required at level B2 or higher, according to the classification provided by the Common European Framework of Reference for Languages (CEFR). The qualifications recognised by the University of Milan, with the corresponding CEFR levels, can be found at: https://www.unimi.it/en/study/language-proficiency/placement-tests-and-english-courses/accepted-language-certificates.
Native English speakers and graduates from university first-level programmes entirely taught in English are exempted from producing any such language qualification.
Students without a documented B2 level may be accepted on condition that their level of English proficiency, assessed during the interview, is evidently good.

Students who do not comply with the above prerequisites can fulfill them by attending crash courses in the above areas to be held starting at the end of August (see the official course's website https://ecgs.unimi.it/en). Note: crash courses are only for admitted students and are not compulsory.

Applicants must apply for admission to the ECGS program from January 22nd to October 30th, 2026. Non EU candidates applying for a visa must apply from January 22nd to April 30th, 2026.
Applicants, both foreign and Italian, must either already hold a bachelor's degree or expect to obtain one by December 31, 2026

Besides meeting the curricular requirements, in case of doubts on the personal preparation resulting from the analysis of the marks obtained in courses belonging to the scientific-disciplinary sectors lilsted above, candidates could be invited to an online interview (in English).

**Programme structure**

The first year of the ECGS Master program is built on eight required courses. Two of these courses (one in either semester) aim at strengthening students’ familiarity with the mathematical and statistical topics that are used in many of the courses of the Master program. The other ones concern the six disciplinary areas that a Master program in class LM-75 (Scienze e tecnologie per l’ambiente e il territorio) must include in Italy.
The first three of these six courses are in the first semester and concern biological, ecological and economical disciplinary areas; the other three are in the second semester and concern the disciplinary areas of chemistry, earth sciences and agronomic sciences. Each of these courses allows the students to obtain eight ECTS credits, whereas either one of the two courses of the mathematical and statistical area allows the students to obtain six ECTS credits.
Therefore, the first year of the ECGS Master program allows the students to obtain 60 ECTS credits. All in all, lectures and classes cover globally 512 hours.

Compulsory attendance
Attendance is strongly recommended.

Curricula
In the first year of the ECGS Master program, students have to select one of the following two curricula:
A: Environmental Systems: Management and Sustainability;
B: Technological Processes and Environmental Sustainability.

Then three courses must be selected from those associated to the chosen curriculum. These courses allow the students to obtain 18 ECTS credits, whereas further 12 ECTS credits are obtained from other two elective courses to be chosen among those offered by the Milan University. The elective courses must be coherent with the teaching objectives of the ECGS master programme. Study plan must be approved by a Committee appointed by the ECGS program Council.
The second year of the ECGS Master program is completed by an internship or a placement period (worth 6 ECTS credits) and by the final dissertation (worth 21 ECTS credits). Over the second year, lectures and classes globally cover 240 hours.

Study plan definition and submission for approval
Students have to submit their study plans in the first year of course. The deadlines and the procedures will be announced on the website: https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/plan-study
After the study plan approval, the student can take additional exams independently in addition to his or her own study plan.

Lecture timetable
The first Semester starts on September 21, 2026 and ends on January 22, 2027.
Suspension period for exam sessions and interim assessments: November 9, 2026 - November 13, 2026.

The second Semester starts on February 22, 2027 and ends on June 11, 2027.
Suspension period for exam sessions and interim assessments: May 3, 2027 - May 7, 2027.
The timetable will be available at https://www.unimi.it/en/node/128/

Testing and assessment procedures
Each course is followed by an exam, usually in the form of a written or oral test (or a combination of the two). Exam grades are calculated on a 30-point scale, 18/30 is the minimum passing grade.
Credits for a course are only granted upon passing the corresponding exam.

Procedures for exam registration and admittance
Exam sessions are scheduled during recess at the end of each semester. For each course, 6 tests are scheduled per academic year https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/sitting-exams/exams-calendar

**Campus**
Lecture rooms and laboratories are located in the “Città Studi” campus, mostly in the University buildings of Via Celoria, 20

**Tutoring**
Each student will have an academic guidance tutor who will help him/her in defining the most appropriate study plan and in managing any issue related to his/her career. Other tutors will support students for International mobility and Erasmus programme and for external internships.

**Language test / computer literacy test**
Among the electives, those who do not hold an Italian high school diploma or degree can obtain 3 credits in Additional language skills: Italian by demonstrating A2 level in Italian per the Common European Framework of Reference for Languages (CEFR). This level can be assessed 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 uploaded through http://studente.unimi.it/uploadCertificazioniLingue ;

- by an entry-level test administrated by SLAM that can 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. As an alternative, they can modify their course programme by choosing a different elective.

**Compulsory attendance**
Attendance is strongly recommended.

**Internship criteria**
In the second year of the ECGS Master students have to include an internship or a placement period (worth 6 ECTS credits).

The Internship or Placement credits can be spent:
- within an external internship;
- within an internal internship;
- within the Multidisciplinary Laboratory of Environmental Change and Global Sustainability organised by ECGS Master

**Degree programme final exam**

The Master degree in Environmental Change and Global Sustainability ends with a final exam worth 21 ECTS credits. This exam consists of the preparation and public discussion of an original thesis drawn up by each graduating student under the guidance of a thesis supervisor. The thesis must be written and discussed in English.
To be admitted to the final exam students must have earned 99 ECTS credits.

## *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 organisations.

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

The University of Milan is a member of the 4EU+ European University Alliance that brings together eight public multidisciplinary universities: University of Milan, Charles University of Prague, Heidelberg University, Paris-Panthéon-Assas University, Sorbonne University of Paris, University of Copenhagen, University of Geneva, and University of Warsaw. The 4EU+ Alliance offers integrated educational pathways and programmes to promote the international mobility of students (physical, blended and virtual).

**Study and internships abroad**

In line with the nature of the ECGS programme, international mobility is highly encouraged.
Students enrolled in the programme may spend a study period abroad under the ERASMUS+ program (they can take courses, take exams, prepare theses, carry out research), obtaining recognition for their academic career from that educational experience.
Erasmus+ also provides Placements, that is, the opportunity for a traineeship in companies and other organisations abroad. The new Erasmus+ program provides the following new study and placement opportunities: a) up to 12 months abroad (study periods and placements); b) placements, including those for new graduates (within 12 months of completing a degree). Students who have already spent a period abroad under the Erasmus+ programme may still apply for an Erasmus+ educational or placement activity. Yet, the months previously spent abroad concur to the attainment of the overall maximum of 12 months for each Erasmus+ study cycle.

**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 organises 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;
Student Desk booking through InformaStudenti

## *ADMISSION CRITERIA: 1ST YEAR OPEN, SUBJECT TO ENTRY REQUIREMENTS*

**Application and enrolment information and procedures**

- Admission interviews:
In the case of need, applicants will be contacted for an on-line interview.

- Enrollment procedures:
https://www.unimi.it/en/study/enrolment

**Links to enrolment information and procedures**

https://www.unimi.it/en/node/92/

**Practical instructions**

Applicants must apply for admission to the ECGS program from January, 22nd to October, 30th, 2026.
Non EU candidates applying for a visa must apply from January, 22nd to April, 30th 2026.

Admission interview:
International candidates, as well as Italian residents, will be contacted for an on-line interview. Detailed information on the application procedures is available on the ECGS course website.
The aim of the individual interviews is to ascertain the candidates' background knowledge, their abilities and competences in the key areas of the ECGS programme.
Please consult the degree course web site for further information and updates (https://ecgs.cdl.unimi.it/en). For enrolment information and procedures: https://www.unimi.it/en/study/enrolment

**N° of places reserved to non-EU students resident abroad**

65

## *ADMISSION CRITERIA: 2°YEAR OPEN*

### *1st COURSE YEAR Core/compulsory courses/activities common to all curricula*

| Scheduling | Learning activity | Module/teaching unit | Ects | Sector |
|---|---|---|---|---|
| *1 semester* | Approaches to the study of ecological systems | | 8 | BIOS-05/A |
| *1 semester* | Biodiversity dynamics and conservation | | 8 | BIOS-03/A |
| *1 semester* | Climate change: impact and adaptation | | 8 | (4) PHYS-05/B, (4) AGRI-02/A |
| *1 semester* | Environmental economics and policy | | 8 | ECON-01/A |
| *1 semester* | Quantitative ecology for environmental change | | 6 | (2) BIOS-05/A, (2) STAT-01/A, (2) MATH-03/B |
| *2 semester* | Chemistry of natural processes and technologies for the environment | | 8 | (1) CHEM-05/A, (7) CHEM-06/A |
| *2 semester* | Statistical methods in environmental studies | | 6 | (1) ECON-05/A, (5) STAT-01/A |
| | | Total number of compulsory credits/ects | 52 | |

### *Elective courses common to all curricula*

**Choose one course between:**

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|---|---|---|---|---|
| *2 semester* | Geodiversity: theory and applications | | 8 | GEOS-03/A |
| *2 semester* | Sedimentary successions and their natural resources for the energy transition | | 8 | GEOS-02/B |

### *2nd COURSE YEAR (available as of academic year 2027/28) Elective courses common to all curricula*

**Students must attend the "Safety for field activities" course. Further information will be available by e-mail or on the course website**

**Students must acquire 6 ECTS choosing one of the following courses:**

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|---|---|---|---|---|
| | Internship | | 6 | NN |
| *2 semester* | Multidisciplinary Laboratory of Environmental Change and Global Sustainability | | 6 | NN |

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|---|---|---|---|---|
| **Students must earn 3 ECTS choosing from the following activities:** | | | | |
| | Additional Language Skills: Italian (3 ECTS)<br>*Strongly recommended for foreing students who do not hold an Italian qualification (Bachelor's degree or high school diploma). See also the section: Language test / computer literacy test.* | | 3 | NN |
| *2 semester* | Project management for sustainable development | | 3 | ECON-07/A |
| *2 semester* | Water resources sustainable economy | | 3 | CEAR-01/B |
| **Students must obtain 12 CFU for elective activities, from all courses offered by the University of Milan** | | | | |
| | | | | |
| ***End of course requirements common to all curricula*** | | | | |
| | Final dissertation | | 21 | NN |
| | | Total number of compulsory credits/ects | 21 | |

## *LIST OF CURRENTLY AVAILABLE CURRICULA*

ENVIRONMENTAL SYSTEMS: MANAGEMENT AND SUSTAINABILITY Course years currently available: 1st
TECHNOLOGICAL PROCESSES AND ENVIRONMENTAL SUSTAINABILITY Course years currently available: 1st

**Procedure for the selection of a curriculum**

In the first year of the ECGS Master program, students have to select one of the following two curricula:
A: Environmental Systems: Management and Sustainability;
B: Technological Processes and Environmental Sustainability.
The deadlines and the procedures will be announced on the website: https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/plan-study

***CURRICULUM: [FBO-A] ENVIRONMENTAL SYSTEMS: MANAGEMENT AND SUSTAINABILITY***

**Core learning objectives for the course**

The general goal of ECGS Master is to train students to tackle environmental change and sustainability in a multidisciplinary perspective. Within this general goal, the curriculum Environmental Systems: Management and Sustainability specifically aims at strengthen the understanding of the tools required to promote a sustainable management and protection of the environment

**Expected learning outcomes**

The curriculum Environmental Systems: Management and Sustainability will allow students to strengthen the competences concerning Economics and the Social Sciences.

**Professional profile and employment opportunities**

The curriculum Environmental Systems: Management and Sustainability is adequate for all the five professional profiles listed for ECGS Master:
1. Environmental manager in agro-food, energy and green economy companies as well as in other companies in the industrial and service sectors;
2. Environmental specialist in the public administration as well as in local governments;
3. Environmental specialist in supra and international bodies as well as in national and international non-governmental organizations.
4. Specialist in environmental impact studies and strategic environmental assessments;
5. Specialist in environmental analysis and monitoring.

## *2nd COURSE YEAR (available as of academic year 2027/28) Elective courses Curriculum-specific elective courses for ENVIRONMENTAL SYSTEMS: MANAGEMENT AND SUSTAINABILITY*

| | | | | |
|---|---|---|---|---|
| **Choose three courses (18 CFU), according to the following rules:** | | | | |
| **1 - the student can choose the following course:** | | | | |
| *1 semester* | Plant and animal diversity: values and risks | | 6 | (3) BIOS-02/A, (3) BIOS-03/A |
| **2 - the student can choose the following course:** | | | | |
| *1 semester* | Ecosystem functioning and services | | 6 | BIOS-05/A |
| **3 - the student can choose the following course:** | | | | |
| *1 semester* | Recycle and life cycle assessment (LCA) of products and processes | | 6 | CHEM-04/A |
| **4 - the student can choose the following course:** | | | | |
| *1 semester* | Georesources and sustainability | | 6 | GEOS-01/D |
| **5 - the student can choose one of the following courses:** | | | | |
| *1 semester* | Agricultural and natural resource economics and policy | | 6 | AGRI-01/A |
| *1 semester* | Applied Environmental and resource economics | | 6 | AGRI-01/A |
| *1 semester* | Bridging science, policy and sustainability | | 6 | (3) PHYS-05/B, (3) PHYS-06/A |
| **6 - the student can choose one of the following courses:** | | | | |
| *2 semester* | Environmental law | | 6 | GIUR-06/A |
| *2 semester* | Green procurement | | 6 | GIUR-06/A |
| *2 semester* | Sustainable development | | 6 | ECON-01/A |

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| **7 - the student can choose the following course:** | | | | |
| *2 semester* | Sustainability Accounting and management | | 6 | ECON-07/A |

***CURRICULUM: [FBO-B] TECHNOLOGICAL PROCESSES AND ENVIRONMENTAL SUSTAINABILITY***

**Core learning objectives for the course**

The general goal of ECGS Master is to train students to tackle environmental change and sustainability in a multidisciplinary perspective. Within this general goal, the curriculum Technological Processes and Environmental Sustainability specifically aims at strengthen the understanding of the dynamics of the different components of the environment.

**Expected learning outcomes**

The curriculum Technological Processes and Environmental Sustainability will allow students to strengthen the competences concerning hard sciences and life sciences.

**Professional profile and employment opportunities**

The curriculum Technological Processes and Environmental Sustainability is adequate for all the five professional profiles listed for ECGS Master:

1. Environmental manager in agro-food, energy and green economy companies as well as in other companies in the industrial and service sectors;
2. Environmental specialist in the public administration as well as in local governments;
3. Environmental specialist in supra and international bodies as well as in national and international non-governmental organizations.
4. Specialist in environmental impact studies and strategic environmental assessments;
5. Specialist in environmental analysis and monitoring.

| ***2nd COURSE YEAR (available as of academic year 2027/28) Elective courses Curriculum-specific elective courses for TECHNOLOGICAL PROCESSES AND ENVIRONMENTAL SUSTAINABILITY*** | | | | |
|---|---|---|---|---|
| **Choose three courses (18 CFU), according to the following rules:** | | | | |
| **1 - the student can choose the following course:** | | | | |
| *1 semester* | Multilevel effects of environmental contamination | | 6 | (2) BIOS-04/A, (2) BIOS-03/A, (2) BIOS-11/A |
| **2 - the student can choose the following course:** | | | | |
| *1 semester* | Ecosystem functioning and services | | 6 | BIOS-05/A |
| **3 - the student can choose the following course:** | | | | |
| *1 semester* | Environmental geochemistry | | 6 | GEOS-01/C |
| **4 - the student can choose one of the following courses:** | | | | |
| *1 semester* | Remote sensing of agro-environmental change | | 6 | AGRI-02/A |
| *1 semester* | Waste management and sustainability | | 6 | (3) AGRI-09/B, (1) AGRI-06/B, (2) AGRI-04/C |
| **5 - the student can choose the following course:** | | | | |
| *1 semester* | Ecosustainable materials and processes | | 6 | CHEM-06/A |
| **6 - the student can choose one or two of the following courses:** | | | | |
| *1 semester* | Bioresource and pollution control technology | | 6 | AGRI-04/B |
| *1 semester* | Environmental change and public health | | 6 | (1) MEDS-26/D, (5) MEDS-02/A |
| *1 semester* | Methods in ecotoxicology | | 6 | (3) MVET-04/A, (3) BIOS-05/A |
| *2 semester* | Food industry design, technology and innovation | | 6 | AGRI-07/A |