



**UNIVERSITA' DEGLI STUDI DI MILANO**  
**PROGRAMME DESCRIPTION - ACADEMIC YEAR 2020/21**  
**BACHELOR**  
**ENVIRONMENTAL SCIENCE AND POLICY - (Classe L-32)**  
**enrolled from 2018-19 a.y.**

### HEADING

<b>Degree classification - Denomination and code:</b>	L-32 Environmental sciences
<b>Degree title:</b>	Dottore
<b>Curricula currently available:</b>	Environmental Management and Sustainability / Environmental Sciences and Technologies
<b>Length of course:</b>	3 years
<b>Total number of credits required to complete programme:</b>	180
<b>Years of course currently available:</b>	1st , 2nd , 3rd
<b>Access procedures:</b>	Cap on student, student selection based on entrance test
<b>Course code:</b>	F2A

### PERSONS/ROLES

#### Head of Study Programme

Prof.ssa Stefanelle Stranieri

#### Tutors - Faculty

Tutor per l'orientamento: prof.ssa Stella Agostini

Tutor per la mobilità internazionale e l'erasmus: prof.ssa Michela Sugni e dott. Luigi Orsi

Tutor piani di studio: prof.ssa Alessia Cavaliere, prof. Maurizio Maugeri, prof. Marco Parolini, prof. Stefano Trasatti

Tutor per laboratori e altre attività: prof. Diego Rubolini

Tutor per trasferimenti: prof.ssa Alessia Cavaliere

Tutor per riconoscimento crediti: prof.ssa Alessia Cavaliere

Tutor per stage e tirocini: prof. Danilo Bertoni

#### Degree Course website

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

via Celoria 2 - II piano Phone 02503 16475 lunedì, martedì, giovedì: 10.30-12.30, 14.00-16.00; mercoledì e venerdì: 14.00-16.00.

A causa dell'emergenza sanitaria è preferibile fissare un appuntamento scrivendo a [sepa@unimi.it](mailto:sepa@unimi.it) Email: [sepa@unimi.it](mailto:sepa@unimi.it)

via Celoria 18 Phone 02503 25032 <https://www.unimi.it/it/node/360> <https://www.unimi.it/it/node/359>

#### Link to degree course regulations

<https://www.unimi.it/it/corsi/corsi-di-laurea/scienze-e-politiche-ambientali>

### CHARACTERISTICS OF DEGREE PROGRAMME

#### General and specific learning objectives

The course aims to achieve the following objectives:

- the transmission to students of a systemic culture related to the natural and human environment;
- the training of graduates able to use the good practices of scientific methods and have adequate theoretical knowledge and operational skills to analyze, interpret and explain environmental phenomena and processes, and to face and solve complex problems that arise in this area;
- the preparation of graduates able to read environmental issues on several levels, using a multidisciplinary and interdisciplinary approach;
- the training of graduates able to operate autonomously, to work in a group and to manage operational situations into the workplace;
- the preparation of graduates able to use at least one European Union language in addition to Italian, in relation to the specific context of reference;
- the provision of cognitive tools that allow graduates to immediately understand the work and professional contexts or to continue their studies in master's programs (first level) or master's degree courses.

#### Expected learning outcomes

In the first two years of the course, the student is expected to acquire knowledge and skills relating to the foundations of

formal and quantitative disciplines (mathematics, statistics and computer science), as well as of "hard sciences" (chemistry, physics, earth sciences). In the first two years the student will also acquire in-depth knowledge and skills in the "life sciences" (biology, ecology, agronomy) and in the economic-legal-social disciplines (political economy, management, law), with particular reference to environmental issues. In the third year, the student will have to further deepen his knowledge and enhance his skills and abilities, also from an operational point of view, in the natural sciences and in the sciences of society, selecting the path that, among those proposed by the Degree Course, fits with the cultural vocation and professional aspirations of the student.

### **Professional profile and employment opportunities**

On the basis of the knowledge, skills and abilities acquired, the graduates of the degree course in Environmental Sciences and Policies will be able to confidently aspire to qualified jobs in companies and private organizations, active - both in the regional context, as well as in the national or international context - in all branches and in all sectors of industry and services for which the relationship with environmental problems in their multiple forms is fundamental (from the energy industry to the agro-food industry, from the green economy to consultancy services companies, companies in the preparation of environmental and social budgets, from companies that provide environmental impact forecasts to those that provide landscape and territorial planning services). They will also be able to reasonably aspire to qualified jobs in the public administration bodies, whose involvement in the control and management of environmental problems and in the implementation of interventions and regulatory policies in this area, again at all levels (local, regional, national and supranational), is becoming more and more pressing and pervasive and requires more and more evident the presence of experts who combine solid knowledge and skills in the natural sciences with robust knowledge and operational skills in the economic and legal field.

### **Notes**

To obtain the degree, students are required to demonstrate an English language proficiency at level B1 within the Common European Framework of Reference for Languages (CEFR). This level can be assessed in the following ways:

- by submitting the language certificate achieved no more than three years prior to the submission, at level B1 or higher, recognised by the University (the list of recognised language certificates can be found at: <https://www.unimi.it/en/node/297/>). The language certificate must be uploaded during the admission process;
- by taking the Placement Test, organised by SLAM exclusively during the first year, from October to December. Students who fail to reach level B1 or B2 will have to attend an English course organised by SLAM. The Placement Test is compulsory for all students who do not have a valid language certificate.

Students who do not take the Placement Test within the deadline and students who fail the SLAM end-of-course test within six attempts will have to obtain a language certificate within the year in which the language exam is scheduled.

## ***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 30 different 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**

About ERASMUS + program, for students enrolled in the degree course in Environmental Sciences and Policies, agreements with international universities specializing in teaching and research on environmental issues have been signed. The study period abroad can be used to take courses and take the related exams, as well as to carry out research activities for the thesis.

For further information write to [sepa@unimi.it](mailto:sepa@unimi.it).

### **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, which last 3 to 12 months, through a public selection procedure.

Ad hoc commissions will evaluate:

- 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, 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

E-mail: [mobility.out@unimi.it](mailto:mobility.out@unimi.it)

Desk opening hours: Monday to Friday 9 am - 12 noon

<b>1st COURSE YEAR Core/compulsory courses/activities common to all curricula</b>		
<b>Learning activity</b>	<b>Ects</b>	<b>Sector</b>
Administrative and environmental law	6	IUS/10
English assessment B1 (3 ECTS)	3	ND
Foundations of biology	9	BIO/06
Foundations of inorganic and organic chemistry	9	CHIM/03, CHIM/06
Fundamentals of Earth sciences	9	GEO/02
Mathematics	9	MAT/09, MAT/01, MAT/02, MAT/03, MAT/04, MAT/05, MAT/06, MAT/07, MAT/08
Physics	6	FIS/08, FIS/07, FIS/06, FIS/05, FIS/04, FIS/03, FIS/02, FIS/01
Probability, statistics and computer science	9	INF/01, MAT/06
Total compulsory credits		60
<b>2nd COURSE YEAR Core/compulsory courses/activities common to all curricula</b>		
<b>Learning activity</b>	<b>Ects</b>	<b>Sector</b>
Botany	9	BIO/02, BIO/01
Ecology	9	BIO/07
Environmental and landscape geology	9	GEO/05
Environmental biochemistry and microbiology	6	BIO/10, BIO/19
Environmental economics	6	SECS-P/01
Microeconomics	9	SECS-P/01
Zoology	9	BIO/05
Total compulsory credits		57
<b>3rd COURSE YEAR Core/compulsory courses/activities common to all curricula</b>		
<b>Learning activity</b>	<b>Ects</b>	<b>Sector</b>
Environmental management	6	SECS-P/08
Natural resources and public goods economics and policy	6	AGR/01
Total compulsory credits		12
<b>Further elective courses common to all curricula</b>		
<p>The student will have to acquire 18 credits among all the offered training activities and all the courses activated by the University, after evaluation by the tutor. The courses not already chosen among the curricula can be selected.</p> <p>During the second or preferably the third year of the course, students will have to acquire 9 CFU through Laboratories and / or Internships and / or field activities.</p> <p>The laboratories activated for the academic year 2020/2021 are as follows:</p> <ul style="list-style-type: none"> <li>- Quantitative analysis of the impact of pollutants on human health lab: computational and experimental methods(9 credits)</li> <li>- Civil and industrial waste management laboratory: regulatory, technical and economic aspects(9 credits)</li> <li>- Ecological Planning Lab (5 credits) - usable only by students who have followed the Statistical analysis of data lab</li> <li>- Mixed Farming Systems and territory lab(9 credits)</li> </ul>		

Internships and / or field activities eventually activated will be published on the website of the degree course <https://spa.cdl.unimi.it/it>.

The student must choose one of the two curricula: Curriculum A - Environmental Management and Sustainability; or Curriculum B - Environmental Sciences and Technologies. Then the student will have to choose 3 courses among those provided for the chosen Curriculum.

### **End of course requirements common to all curricula**

Final exam	6	NA
Total compulsory credits	6	

## **ACTIVE CURRICULA LIST**

Environmental Management and Sustainability Course years currently available: 1°, 2°, 3°  
 Environmental Sciences and Technologies Course years currently available: 1°, 2°, 3°

### **Procedure for choosing a curriculum**

In the second year the student presents the study plan, which provides for the choice of one of the two curricula: "Environmental management and sustainability policies" or "Sciences and technologies for the environment and its protection", with the specification of three courses among those listed in the Study Manifesto as characterizing the chosen curriculum, as well as the indication of courses and others educational activities a choice of the student for a total of 18 ECTS. This last choice can be made in complete freedom within the overall educational offer of the University, provided that the chosen courses and training activities are consistent with the training project presented by the student with his / her own pine of studies. The courses not already chosen, among those characterizing the selected curriculum, as well as all the courses characterizing the unselected curriculum are naturally available for the free choices of the students. For date and modalities for compulsory presentation of the study plan <https://www.unimi.it/en/node/122/>

The presentation or variation of the piano of studies in periods other than that specified or by non-enrolled students, all academic in question, is not allowed. The verification of the correspondence between the last approved study plan and the exams taken is a necessary condition for admission to the same degree. If, upon submission of the graduation application, the student's career does not comply with the approved study plan, the student cannot be admitted to the graduation exam.

### **CURRICULUM: [F2A-A] Environmental Management and Sustainability**

#### **Qualifying Training Objectives**

The aim of the curriculum "Environmental management and sustainability policies" is to deepen topics from the economic, legal and social sciences with reference to environmental issues.

<b>Further elective courses Curriculum-specific features Environmental Management and Sustainability</b>		
<b>Choose 3 of the following courses:</b>		
Administrative law of sustainable development	6	IUS/10
Agri-food policy and environmental sustainability	6	AGR/01
Climate change economics and policy	6	SECS-P/01
Environmental accounting and management	6	SECS-P/08, SECS-P/07
Environmental planning and land policy	6	ICAR/20
Environmental prevention	6	MED/50
Globalization and environmental policy	6	AGR/01
Sustainability of food production	6	AGR/15
Sustainable innovation of animal nutrition	6	AGR/18

### **CURRICULUM: [F2A-B] Environmental Sciences and Technologies**

#### **Qualifying Training Objectives**

The aim of the curriculum "Sciences and technologies for the environment and its protection" is to deepen the topics of the natural sciences and biological sciences with reference to environmental problems.

<b>Further elective courses Curriculum-specific features Environmental Sciences and Technologies</b>		
<b>Choose 3 of the following courses:</b>		
Applied ecology	6	BIO/07
Biodiversity management and conservation	6	BIO/05
Climatology	6	GEO/04
Environmental Chemistry	6	CHIM/12
Environmental toxicology	6	BIO/14
Evolutionary biology and phylogeny	6	BIO/05
Foundations of ecotoxicology	6	BIO/07
Human health and environmental risk	6	MED/04