



**UNIVERSITA' DEGLI STUDI DI MILANO**  
**PROGRAMME DESCRIPTION - ACADEMIC YEAR 2020/21**  
**IN**  
**ENVIRONMENTAL AND FOOD ECONOMICS**  
**Immatricolati dall'anno accademico 2014/15**

### **HEADING**

<b>Degree classification - Denomination and code:</b>	LM-76
<b>Degree title:</b>	Dottore Magistrale
<b>Curricula currently available:</b>	ENVIRONMENTAL AND ENERGY ECONOMICS / ECONOMICS AND MANAGEMENT OF THE AGRI-FOOD SYSTEM
<b>Length of course:</b>	2 years
<b>Credits required for admission:</b>	180
<b>Total number of credits required to complete programme:</b>	120
<b>Course years currently available:</b>	1st , 2nd
<b>Access procedures:</b>	open, subject to entry requirements
<b>Course code:</b>	K07

### **PERSONS/ROLES**

#### **Head of Study Programme**

Prof.ssa Valentina Raimondi

#### **Tutors - Faculty**

Study plan tutor:

Alessandro Olper - wednesday 14.30-18.30

Alessandro Banterle - tuesday 14.30-18.30

Francesco Bosello - tuesday 14.30-17.30

Valentina Raimondi - thursday 10.30-13.00

#### **Degree Course website**

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

#### **Department of Environmental Science and Policy**

<http://eng.esp.unimi.it/ecm/home>

#### **EFE Secretariat**

Mon – Fri 10-12 am and 2.30-4 pm

#### **E-mail**

Email: [efe@unimi.it](mailto:efe@unimi.it)

#### **Students administrative office**

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

#### **Telephone**

Tel. +39 02 503 16475 / +39 02 503 16486

### **CHARACTERISTICS OF DEGREE PROGRAMME**

#### **General and specific learning objectives**

The relationship between the environment, natural resources, and the agri-food system plays a central role in the development of modern societies. The issues of sustainable economic development, the management of natural and energy resources, and the sustainability of the agri-food system represent new economic and policy challenges. The Master degree in Environmental and Food Economics provides the conceptual and analytical tools for participants to be able to address those challenges. Advanced expertise in economics and business administration and management, quantitative methods, and specific theoretical and applied knowledge in environmental and natural resource economics and in the economics and management of the agri-food chain is provided. The aim is to equip students with a solid understanding of the instruments to

promote sustainable economic development, the management of natural resources (water, soil, energy), environmental and energy policies, management and innovation of the agri-food sector, internationalization of agri-food companies, food security issues and rural development. The Master degree in Environmental and Food Economics represents a novelty in the Italian university system, by combining topics of environmental and climate change economics with the economics and management of the agri-food sector, carefully selects the contents of its courses, and for being taught entirely in English.

### **Expected learning outcomes**

In the spirit of harmonization of education within the European Union, graduates of this Master programme 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: Economics, Accounting and Management, Mathematics and Statistics, and Environmental and Food Law.

As to Economics, the courses offered include: advanced microeconomics, environmental and natural resource economics, sustainable development, energy economics, agri-food economics, international trade. The theories and the analytical tools taught in the program will enable students to understand and apply economic principles to the complex phenomena characterizing the environment, natural resources, climate change and energy markets, as well as to the functioning of domestic and international agri-food markets and related policies.

As to Accounting and Management, the courses offered include: accounting, environmental management, management of the international food chain, marketing and consumer behavior. The knowledge and skills acquired in this area will enable graduates to understand issues and problems of business management, with specific attention to the green business and green marketing, internationalization strategies for the agri-food firms, and to the issues related to consumer behavior.

The courses offered in the area of Mathematics and Statistics include: mathematics for economics and statistics and econometrics. Students are expected to learn how to carry out quantitative analyses of business and economic problems, as well as of environmental, energy and agri-food policies.

In the Law area the main focus will be on environmental and food law. The lectures will provide the ability to understand the norms and laws that characterize the environment and agri-food sectors, as well as the legal aspects of international agreements on the environment and trade.

#### **B. Applying knowledge and understanding**

Graduates will be able to apply the knowledge and skills acquired in the Master programme to: 1) the analysis and management of issues in the area of sustainable development and of natural resources, and in green and agri-food marketing; 2) the analysis of public policies for the environment, energy, and agri-food markets; 3) the economic analysis of climate change; 4) the analysis of energy and food markets; 5) the evaluation of the sustainability of food production and consumption; 6) the study of agri-food firms' behavior in international markets; 7) the analysis of food safety and nutrition policies; 8) food security and rural development in developing countries.

#### **C. Making judgments**

The Master programme will grant graduates the ability to make judgments and to critically investigate the effects and effectiveness of the economic and policy decisions related to the environment, the energy and the agri-food sector, including the ethical implications of these decisions and actions. They will be able to critically evaluate the effectiveness and consequences of company strategies aimed to deal with problems of sustainability and internationalization. The multidisciplinary approach of this course 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**

Graduates will be able to present and communicate effectively within companies and institutional bodies, at both national and international level, the results of their work (projects, reports, documents, analytical studies, research papers, etc.). 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 communicate effectively in the workplace is primarily gained through presentation and discussion of case studies, a practice that is compulsory for several courses and during the final dissertation.

#### **E. Learning skills**

Graduates will learn how to develop and improve their learning skills through the access to and the consultation of the scientific literature, of databases and other online information, and by analyzing data using econometric and statistical tools.

The Master degree in Environmental and Food Economics also provides the methodological skills and the knowledge base that make it possible for graduates to continue their studies in doctoral programs. Master students have also the opportunity to attend the other activities organized 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 Master degree in Environmental and Food Economics is organized in two curricula: i. Environmental and Energy Economics; ii. Economics and Management of the Agri-Food System. The professional profiles that characterize the two curricula can be summarized as follows.

The professional profile of the Environmental and Energy Economics curriculum is more oriented to the world of institutions, both public and private, with job opportunities in national, EU, and international institutions, public administration, Energy Authorities, FAO, OECD, European Commission, public and private research organizations, and research departments of large national and multinational companies, as well as the green economy.

The professional profile of the Economics and Management of the Agri-Food System curriculum is more oriented to the world of private business with job opportunities in agri-food companies (small and medium enterprises, multinationals, GDO), as well as in producer organizations and national, EU, and international institutions that carry out research and studies in the fields of agricultural and food policies, food security, and rural development (FAO, World Bank, OECD, and the European Commission).

### **Pre-requisites for admission**

- Pre-requisites for admission

To attend the Master programme in Environmental and Food Economics it is necessary to possess an adequate knowledge of mathematics, economics and statistics at the undergraduate level. The Master programme can be attended by students with an Italian three-year undergraduate degree (ex. DM 270/04 or equivalent ex. DM 509/99) in any one of the following classes:

Geografia (L-6),

Ingegneria civile e ambientale (L-7), Ingegneria dell'informazione (L-8), Ingegneria industriale (L-9), Scienze biologiche (L-13),

Scienze del turismo (L-15),

Scienze dell'amministrazione e dell'organizzazione (L-16), Scienze dell'economia e della gestione aziendale (L-18),

Scienze della pianificazione territoriale, urbanistica paesaggistica e ambientale (L-21), Scienze e tecnologie agrarie e forestali (L-25),

Scienze e tecnologie alimentari (L-26), Scienze e tecnologie chimiche (L-27), Scienze e tecnologie fisiche (L-30), Scienze e tecnologie informatiche (L-31),

Scienze e tecnologie per l'ambiente e la natura (L-32), Scienze economiche (L-33),

Scienze geologiche (L-34), Scienze matematiche (L-35),

Scienze politiche e delle relazioni internazionali (L-36),

Scienze sociali per la cooperazione, lo sviluppo e la pace (L-37), Sociologia (L-40),

Statistica (L-41), Storia (L-42),

Tecnologie per la conservazione e il restauro dei beni culturali (L-43).

Students having obtained an undergraduate degree in classes other than those listed above and students with foreign degrees are admitted to the programme subject to a favorable decision by the Didactic Committee or by an ad hoc committee named by it.

There are minimum requirements in order to be admitted to the programme:

- at least 6 ECTS credits in the area of mathematics and statistics (MAT/01 ? MAT/09 ? SECS-S/06);

- at least 6 ECTS credits in the area of economics and agricultural economics (AGR/01, SECS-P/01 ? SECS-P/06, ING-IND/35);

- at least 6 ECTS credits in the area of management (AGR/01, SECS-P/07-SECS-P/11, ING-IND/35);

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 official course's website <https://efe.cdl.unimi.it/en>). (Note, crash courses are only for admitted students).

Students with foreign qualifications are expected to meet requirements equivalent to the minimum ones required from students with an Italian degree. The existence pre-requisites will be verified by a special committee appointed by the Didactic Committee.

In addition, applicants must meet one of the following requirements: 1. be English mother tongue; 2. have obtained a high-school diploma in English; 3. have obtained a Bachelor's or other first-level university degree in English. Students who do not meet any of the requirements listed in points 1, 2 and 3 must have a B2 level or higher in English, according to the Common European Framework of Reference for Languages (CEFR). For an overview of CEFR levels, please see:

<https://www.unimi.it/en/study/language-proficiency/placement-tests-entry-tests-and-english-courses>.

Students meeting the above requirements are invited to an interview for admission (in English). The interview, done remotely via electronic devices if necessary, is aimed at verifying the motivations of the candidates, and the above mentioned skills.

Each applicant must submit his application for admission, a letter of motivation and at least one letter of recommendation (this apply only to foreign students).

- Practical instructions

Applicants, both foreign and Italian holding a bachelor's degree or expecting to obtain it by December 31st, 2020, must apply for admission to the EFE program from March 1st to June 30th, 2020. Non-EU Applicants from outside Italy holding a non-Italian bachelor's degree or expecting to obtain it by December 31st, 2020, must submit a pre-application at the Italian Embassy of their own country. Applicants will be selected on the basis of an interview, which aim is to ascertaining the applicants' motivations as well as their personal knowledge, competences, and skills in the core areas of the EFE program. For an idea of the appropriate level of knowledge, competences, and skills, candidates may consult the following textbooks:

Economics:

- Varian H., Intermediate Microeconomics. A Modern Approach, 8th edition, Norton, New York, N.Y., 2009. Chapters: 1-6, 14-16, 18-24.

Quantitative methods:

- Haeusserl E. F., R. S. Paul, R. J. Wood, Introductory Mathematical Analysis for Business, Economics, and the Life and Social Sciences, 13th edition, Pearson Prentice Hall, Upper Saddle River, 2010. Chapters: 0-6, 10-14.

Applicants will be contacted for a skype interview.

Further detailed information concerning the EFE program are available at <https://efe.cdl.unimi.it/en>. For any other information, please contact the program secretariat: [efe@unimi.it](mailto:efe@unimi.it); tel. +39 02 503-16475; fax +39 02 503-111.

Please consult the degree course web site for further information and updates: <https://efe.cdl.unimi.it/en>.

## **Programme structure**

The Master degree in Environmental and Food Economics (EFE) is an internationally oriented high-quality programme designed to provide students with both an excellent academic background and a practical attitude.

The degree guarantees a promising outlook for a future professional career in today's challenging fields of the economics of sustainability and of the management of the agricultural and food (agri-food for short) system.

The Master degree is comprised of teaching and other educational activities for a total of 120 ECTS and it is entirely taught in English.

- Programme structure

The first year of the program initially provides a series of teachings instrumental to the disciplines involved in the master (mathematics, statistics, econometrics, law, economic history). Then its organization is balanced with common core teachings in the following areas: business (accounting, environmental management), economics (microeconomics, environmental & natural resource economics), and the environment (agri-food economics, International agri-food markets and policy). The two curricula start from the end of the first year.

Curriculum A – Environmental and Energy Economics – aimed to provide professional training in energy and environmental economics, and focused on sustainable economic development, evaluation of environmental assets, energy markets and policies, management of natural and environmental resources, environmental policies, economic impact assessment of climate change, adaptation strategies and mitigation policies and international agreements on climate change.

Curriculum B – Economics and Management of the Agri-Food System – aimed to provide professional training in the management and administration of national and international companies in the agri-food sector, and the analysis of economic and policy problems of the agri- food system. Skills and competences are provided to analyze and manage problems caused by economic and trade integration, to deal with internationalization issues, to assess company strategies, to study and manage national and international value chains, consumer behavior, marketing strategies, food security issues and rural development.

- Study plan definition and submission for approval

Students may submit their study plans starting from the first year of course.

- Suggested pre-requisites:

1. Mathematics for economics for the Advanced Microeconomics course;
2. Others prerequisites can be suggested by professors.

## **Campus**

### **Compulsory attendance**

Attendance is strongly recommended

### **Degree programme final exam**

To be admitted to the final exam students must have earned 99 ECTS credits.

The Master degree in Environmental and Food Economics is completed by a final exam worth 21 ECTS.

This test is composed of the preparation and public discussion of an original thesis drawn up by the student under the guidance of a thesis supervisor.

This thesis must be drawn up and discussed in English.

## ***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 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**

#### **• ERASMUS+ PROGRAM**

The degree in Environmental and Food Economics offers the opportunity to study at several European universities, where students will be able to attend lectures and obtain credits for their degree. Our partners are selected among the most prestigious academic institutions: France (Rennes), Finland (University of Helsinki), Germany (University of Gottingen), Greece (University of Athens), Netherlands (Wageningen University), Poland (University of Warsaw), Spain (University of Madrid-Politenica), Switzerland (University of Geneve).

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) 12 months abroad (study periods and placements); b) placements, including for new graduates (within 12 months of completing a degree). Students who have already studied or had a placement abroad may apply to Erasmus+ nevertheless remembering that the possible total of 12 months for each Erasmus+ study cycle include the months previously spent abroad.

### **How to participate in Erasmus mobility programs**

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

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

### **Application and enrolment information and procedures**

<https://www.unimi.it/en/study/enrolment>

## **ADMISSION CRITERIA: 2°YEAR OPEN**

<b>1st COURSE YEAR Core/compulsory courses/activities common to all curricula</b>				
<b>Scheduling</b>	<b>Learning activity</b>	<b>Module/teaching unit</b>	<b>Ects</b>	<b>Sector</b>
1 semester	Advanced microeconomics		8	SECS-P/01
1 semester	Environmental accounting and management (Total number of ects:12)	Accounting	6	SECS-P/07
		Environmental management	6	SECS-P/08
1 semester	Mathematics for economics		6	MAT/06
2 semester	Economics and politics of the agrifood sector (Total number of ects:14)	Agrifood economics	7	AGR/01
		International agrifood markets and policies	7	AGR/01
2 semester	Environmental and natural resource economics		8	SECS-P/01
2 semester	Statistics and econometrics		9	(6) SECS-S/01, (3) SECS-P/05
Total number of compulsory credits/ects			57	

<b>2nd COURSE YEAR Core/compulsory courses/activities common to all curricula</b>				
<b>Scheduling</b>	<b>Learning activity</b>	<b>Module/teaching unit</b>	<b>Ects</b>	<b>Sector</b>
1 semester	Environmental and food law		6	IUS/13
2 semester	Economic history		6	SECS-P/12
Total number of compulsory credits/ects			12	

### **Further elective courses common to all curricula**

#### **Open choice courses: 9 CFU**

The student can employ part or all of the 9 CFU of freely chosen activities in attending one ore more of the following courses:

2 semester	Food Industry Design Technology and Innovation		6	AGR/15
2 semester	Social Media for Environmental Communication		3	SECS-P/08
2 semester	Water resources sustainable economy		3	ICAR/02

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

	Final exam		21	NA
	Stage		3	NA
Total number of compulsory credits/ects			24	

## **LIST OF CURRENTLY AVAILABLE CURRICULA**

ENVIRONMENTAL AND ENERGY ECONOMICS Course years currently available: 1st, 2nd

ECONOMICS AND MANAGEMENT OF THE AGRI-FOOD SYSTEM Course years currently available: 1st, 2nd

### **CURRICULUM: [K07-A] ENVIRONMENTAL AND ENERGY ECONOMICS**

<b>2nd COURSE YEAR Core/compulsory courses/activities Curriculum-specific features ENVIRONMENTAL AND ENERGY ECONOMICS</b>				
<b>Scheduling</b>	<b>Learning activity</b>	<b>Module/teaching unit</b>	<b>Ects</b>	<b>Sector</b>
1 semester	Energy economics		6	SECS-P/01
2 semester	Global and climate change economics		6	SECS-P/01
2 semester	Sustainable development		6	SECS-P/01
Total number of compulsory credits/ects			18	

### **CURRICULUM: [K07-B] ECONOMICS AND MANAGEMENT OF THE AGRI-FOOD SYSTEM**

<b>2nd COURSE YEAR Core/compulsory courses/activities Curriculum-specific features ECONOMICS AND MANAGEMENT OF THE AGRI-FOOD SYSTEM</b>				
<b>Scheduling</b>	<b>Learning activity</b>	<b>Module/teaching unit</b>	<b>Ects</b>	<b>Sector</b>
1 semester	Food chain in the global market		6	AGR/01
1 semester	Food marketing and consumer behavior		6	AGR/01
2 semester	Food security and rural development		6	AGR/01

	Total number of compulsory credits/ects	18
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