



UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2019/20
IN
ENVIRONMENTAL AND FOOD ECONOMICS
Immatricolati dall'anno accademico 2014/15

HEADING

Degree classification - Denomination and code:	LM-76
Degree title:	Dottore Magistrale
Curricula currently available:	ENVIRONMENTAL AND ENERGY ECONOMICS / ECONOMICS AND MANAGEMENT OF THE AGRI-FOOD SYSTEM
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:	open, subject to entry requirements
Course code:	K07

PERSONS/ROLES

Head of Study Programme

Prof. Alessandro Olper

Tutors - Faculty

Prof. Alessandro Olper
Prof. Alessandro Banterle
Prof. Francesco Bosello
Prof.ssa Valentina Raimondi

Degree Course website

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

Degree Course Website

<https://www.efe.cdil.unimi.it/en>

Department of Environmental Science and Policy

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

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CHARACTERISTICS OF DEGREE PROGRAMME

Introduction

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.

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, economics of growth and sustainability, 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

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>).

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.

Students meeting the above requirements are admitted to the programme and 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, the above mentioned skills and the knowledge of the English language.

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).

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 safety problems, and rural development, food security issues and rural development.

Didactic Area

Faculty of Agricultural and Food Sciences - Via Celoria, 2 - 20133 MILAN

Compulsory attendance

Attendance is strongly recommended.

Study plan definition and submission for approval

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

Degree programme final exam

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.

Criteria for admission to degree course final exam

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 the international mobility of its students, offering them the opportunity to spend periods of study and training abroad, a unique opportunity to enrich their curriculum in an international context.

Study and internships abroad

• ERASMUS+ PROGRAM

In line with the nature of the course, international mobility is very desirable.

Students enrolled on the course may spend a study period abroad under the ERASMUS+ program (take courses, take exams, prepare theses, carry out research) obtaining recognition for their academic career from the 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) 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.

Information: <http://www.demm.unimi.it/ecm/home/didattica/erasmus>

How to participate in Erasmus mobility programs

To gain access to mobility programs for study purposes, lasting 3-12 months, the enrolled students of the University of Milan must attend a public selection that starts usually around the month of February each year through the presentation of specific competition announcements, which contain information on available destinations, respective duration of the mobility, requirements and deadlines for submitting the online application.

The selection, aimed at evaluating the proposed study abroad program of the candidate, knowledge of a foreign language,

especially when this is a preferential requirement, and the motivations behind the request, is performed by specially constituted commissions.

Each year, before the expiry of the competition announcements, the University organises information sessions for the specific study course or groups of study courses, in order to illustrate to students the opportunities and participation rules.

To finance stays abroad under the Erasmus + program, the European Union assigns to the selected students a scholarship that - while not covering the full cost of living abroad - is a useful contribution for additional costs as travel costs or greater cost of living in the country of destination.

The monthly amount of the communitarian scholarship is established annually at national level; additional contributions may be provided to students with disabilities.

In order to enable students in economic disadvantaged conditions to participate in Erasmus+ program, the University of Milan assigns further additional contributions; amount of this contributions and criteria for assigning them are established from year to year.

The University of Milan promotes the linguistic preparation of students selected for mobility programs, organising every year intensive courses in the following languages: English, French, German and Spanish.

The University in order to facilitate the organisation of the stay abroad and to guide students in choosing their destination offers a specific support service.

More information in Italian are available on the website: www.unimi.it/studenti/erasmus/70801.htm

For assistance please contact:

Ufficio Accordi e relazioni internazionali

via Festa del Perdono 7 (ground floor)

Tel. 02 503 13501-12589-13495-13502

Fax 02 503 13503

E-mail: mobility.out@unimi.it

Desk opening hour: Monday-friday 9 - 12

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

Application and enrolment information and procedures

Admission interviews:

September 2019, room “Aula di Economia”, for applicants that already have the bachelor degree.

January 2020, room “Aula di Economia”, for applicants that obtain the bachelor degree within the end of December 2019.

Interview dates will be published on the course’s official website www.efe.unimi.it

Practical instructions

Practical instructions

Candidates residing in Italy must submit their application for the Master degree course in EFE, starting from March 1 to September 13, 2019, at www.unimi.it/studenti/matricole/77648.htm, or in the course website, at www.efe.unimi.it.

Foreign candidates residing abroad who are graduates (bachelor’s degree) from non-Italian universities may apply for the Master degree course in EFE starting from March 1 to September 13, 2019.

Admission interview:

Foreign candidates, as well as Italians, may be interviewed telematically via Skype. Dates of telematic interviews will be published on the EFE website.

Detailed information on the application procedures is available on the EFE course website.

The aim of the individual interviews is to ascertain the candidate’s motivation, knowledge, abilities, and competences in the EFE program’s key areas.

Candidates may consult the following texts in order to obtain an idea of the appropriate level of knowledge and abilities:

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:

- Haeusslerl 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.

Please consult the degree course web site for further information and updates: www.efe.unimi.it.

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	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)	Agri-food 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	
2nd COURSE YEAR Core/compulsory courses/activities common to all curricula				
Scheduling	Learning activity	Module/teaching unit	Ects	Sector
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				
A scelta dello studente: CFU 9				
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

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

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

2nd COURSE YEAR Core/compulsory courses/activities Curriculum-specific features ECONOMICS AND MANAGEMENT OF THE AGRI-FOOD SYSTEM				
Scheduling	Learning activity	Module/teaching unit	Ects	Sector
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	

COURSE PROGRESSION REQUIREMENTS

Suggested pre-requisites:

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