

PROGRAMME INFORMATION



UNIVERSITY MASTER'S DEGREE IN SCIENCES IN AGRI-ENVIRONMENTAL AND AGRI-FOOD SCIENCES

CÓDIGO 215701



**UNIVERSITY MASTER'S DEGREE
IN SCIENCES IN AGRI-ENVIRONMENTAL
AND AGRI-FOOD SCIENCES**

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University Master's Degree in Sciences in Agri-environmental and Agri-food Sciences

INFORMATION IDENTIFYING THE QUALIFICATION

Name and status of awarding institution

Universidad Nacional de Educación a Distancia.

Universidad Autónoma de Madrid.

Public universities.

Name of qualification and title conferred in original language

Máster Universitario en Ciencias Agroambientales y Agroalimentarias por la Universidad Autónoma de Madrid y la Universidad Nacional de Educación a Distancia

Status

National joint degree with national validity.

Approved by Accord of the Council of Ministers on January 13th, 2017.

Main field(s) of study for the qualification

The study is included in the field of Sciences.

Language(s) of instruction/examination

The degree is taught in Spanish.

INFORMATION ON THE LEVEL OF THE QUALIFICATION

Level of qualification

Level 3 (Master) in the Spanish Framework of Higher Education (MECES) is equivalent to level 7 of European Qualification Framework (EQF).

Official length of programme

The official length of the programme is 60 ECTS. 1 year full time.

Access requirements

Bachelor's Degree in Environmental Sciences, Chemistry, Biology, Biochemistry, Engineering (Agronomic, Environmental, Industrial ...), Food Science and Pharmacy, and related qualifications to Experimental Sciences

INFORMATION ON THE CONTENTS

Mode of study

Distance learning full time.

Programme requirements

The programme of studies is composed of 23 compulsory ECTS, 20 elective ECTS and 17 Master's Dissertation credits.

Subjects

- Soils in an agri-environmental context
- Factors involved in crop production
- Sustainable agricultural production systems. Organic foods.
- Quality and safety of agricultural and food products
- Integrated pest management: environmental concerns.
- Fertilization, fertilizers, and their environmental concerns
- Application of Geographical Information Systems (GIS) and Remote Sensing in agriculture and the environment
- Food and environmental toxicology
- Advanced analytical techniques for food, agriculture and the environment
- Researching in agro-environmental sciences: first steps
- Soil recovery: emerging and agricultural pollutants
- Waste and by-product recycling: agri-environmental and food applications.
- Advanced technologies in fertilizer application
- Agri-environmental assessment and consultancy.
- Soils in an agri-environmental context
- Factors involved in crop production
- Master's Thesis

Grading scheme

In the Spanish university system, modules/courses are graded on a scale of 0 to 10 points with the following qualitative equivalence:

0-4.9: "suspense"; 5-6.9: "aprobado"; 7-8.9: "notable"; 9-10: "sobresaliente". A special mention, "Matrícula de Honor" may be granted to up to 5% of the

students in a group provided they have got a "sobresaliente". To pass a module/course it is necessary to get at least 5 points.

INFORMATION ON THE FUNCTION OF THE QUALIFICATION

Access to further study

This qualification gives access to Doctoral studies, provided that the student has completed a minimum of 300 ECTS in the overall teachings of Bachelor and Master.

Stated objectives associated with the qualification and professional status (if applicable)

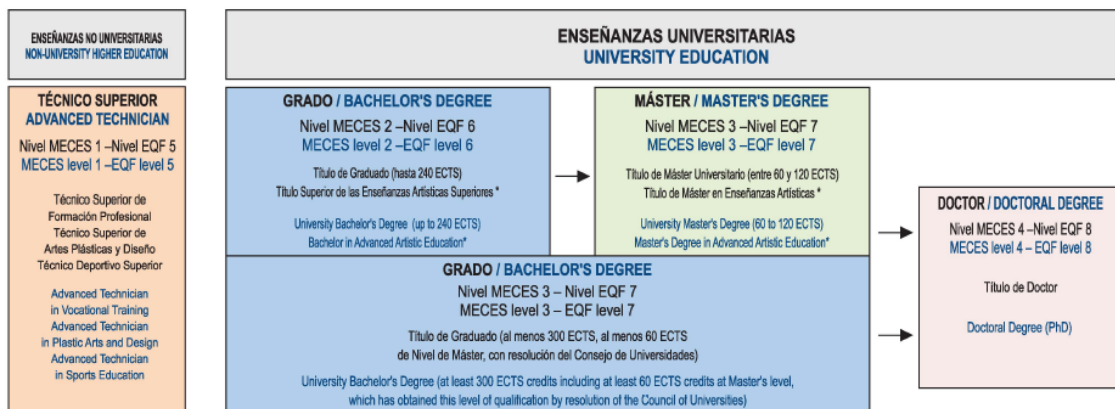
The main goal of this MSc is to provide expertise on agricultural systems and specialized training in agrochemical applications considering the environmental risk associated, as well as new sustainable agricultural practices. It will provide advanced theoretical and practical skills in agricultural food production, food security and quality, concomitantly to environmental protection, by using a multidisciplinary approach. After fulfilling their MSc studies, the student will be able to:

1. Carry out an integrated soil fertility diagnosis, based on the specialized knowledge of soil composition and properties, using advanced computing tools to model chemical equilibria in soil.
2. Merge multidisciplinary approaches (chemical, physiological, agronomical and environmental) in understanding the dynamics of mineral nutrients in plants, and apply them to the diagnosis of plant nutritional alterations and to the design of optimized nutrient solutions.
3. Carry out a transversal evaluation of the efficiency, reactivity and environmental implications of the use of fertilizers and plaguicides, including their integrated and sustainable management.
4. Apply their knowledge on different agri-food production systems and their respective environmental impact, paying special attention to the new trends in ecological production (organic farming).
5. Get advanced skills in the application of chemical analysis of agricultural, environmental and food samples, giving an integrated interpretation of the results.
6. Elaborate technical reports in agri-food production, integrating multidisciplinary approaches.
7. Apply their knowledge about processing, conservation and trade of agri-food products to the food production sector.
8. Analyze the factors affecting agri-food quality and implement advanced quality management models.
9. Have a sound background on the origin and consequences of the main potential toxics in agri-food and evaluate potential health and environmental risks of environmental contaminants.
10. Evaluate the role of environmental and endogenous factors on to plant growth, in order to prepare specialized decision making strategies in the agri-food and agri-environmental fields.

ADDITIONAL INFORMATION

<https://www.uned.es>
<https://www.ucm.es>

INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM



* Las enseñanzas Artísticas Superiores son Enseñanzas no Universitarias dentro del Sistema Educativo español de Enseñanza Superior
* Advanced Artistic Education is non-university education within the Spanish Higher Education System