

# MASTER & MASTER OF SCIENCE PROGRAMMES IN “MEDITERRANEAN ORGANIC AGRICULTURE” ACADEMIC YEAR 2020 - 2021



## DESCRIPTION

The Master of Science Programme provides a two-year curriculum whose main objective is to prepare a new generation of motivated students towards professional and academic careers that promote the development of organic agriculture, with a particular emphasis to Mediterranean contexts.

The programme proposes a holistic view for the organic sector development, presenting theoretical and methodological approaches to sustain transition to organic agriculture through agroecological principles, and with a perspective of sustainable food systems development. The course provides deep insights into organic farming and food regulatory frames. Special emphasis is given to the range of on-farm technologies and practices to improve soil health and fertility and manage pest and diseases. Economics and marketing issues are also presented, leading students through an understanding of sustainable food value chains.

At the end of the course students will have the following skills and competencies:

- ✓ Understand the importance of sustainable production and advocate for ecologically sound solutions, at different levels;
- ✓ Know the organic legislative and policy frameworks and how to drive farms to a transition towards organic farming and agroecological principles;
- ✓ Know how to produce safe, high quality and sustainable organic food;
- ✓ Understand economics and market issues, being able to analyse and design organic food value chains;
- ✓ Learn how to facilitate multi-actors networking for the organic sector development;
- ✓ Have expertise to assess agricultural, environmental, and socio-economic opportunities and constraints of organic agriculture in different Mediterranean areas.

International scientists and practitioners, with a consolidated knowledge on the covered topics, will give lectures.

Students will also undertake several practical activities and assignments, aimed at developing their skills and competencies in the Master sector.

## ORGANIZATION

**First Year: 60 ECTS**

**Diploma: Master of MAIB / Master Universitario di I Livello (First level master)**

**Duration: 8 months (Dec 2020-Feb 2021 distance learning; Mar – Jul 2021 at CIHEAM Bari)**

**Second Year: 60 ECTS**

**Diploma: Master of Science**

**Duration: 12 months (mobility in the country of origin)**

## CANDIDATES' PROFILE

Courses are addressed to new graduate students and young professionals with a university background related to agronomic, horticultural, agricultural marketing and socio-economic issues.

### Requirements:

- **Three years (180 ECTS) or four years (240 ECTS) of university studies;**
- **Four years out of five of university studies (240 ECTS)**, upon agreement between the sending University and CIHEAM Bari;
- **Five years of university studies (300 ECTS);**
- **Professionals** having a degree (3-4years) and at least **2 years** of experience in a field related to the Master Programme;
- Good Knowledge of **spoken and written English**;
- Personal access to **computer facilities**.

## ADMISSION

Selection of students is based on:

1. Screening of documents sent online by candidates to support their application;
2. Skype interview

**Submission of applications through the online procedure**

**Deadline: 30 September, 2020**

## COSTS

**Registration fee: 200.00€/year**

**Tuition fee: 500.00€/month** (travel, accommodation and insurance expenses not included)

## BENEFICIARIES

Master and MSc Programmes are open to candidates of any nationality

## SCHOLARSHIPS

CIHEAM BARI grants **full or partial scholarships** to candidates according to a ranking list. Priority is given to students coming from CIHEAM Member countries and other Mediterranean, Balkan and Middle Eastern Countries

## LANGUAGE OF INSTRUCTION: English

For further information and application procedure:

[www.iamb.ciheam.org](http://www.iamb.ciheam.org)

# FIRST-YEAR PROGRAMME

## MASTER/MASTER UNIVERSITARIO DI I LIVELLO

### OCTOBER 2019 - JUNE 2020

The Master course will develop according to a series of teaching units and a final project:

Unit I - Sustainability in agriculture and food systems: the unit frames the concepts of sustainability applied to agriculture and food sectors and provides elements for understanding the main challenges to designing solutions and actions towards sustainable agri-food systems. The multi-dimensions nature of sustainability challenges will be analyzed, bringing students to reflect on processes for sustainability transitions in agri-food systems.

Unit II - Climate “smart” agroecology: Agroecology is the discipline that studies ecological processes at the base of the functioning of agroecosystems. The course aims to provide a widely applicable knowledge base to increase the resilience and production of agroecosystems in a changing climate scenario. Students will learn how to analyze the complexities and challenges of agroecosystems, and ways for sustainable planning of actions to mitigate and adapt to climate change and other global drivers of change.

Unit III - Smart tools for the management of natural resources in agriculture: the unit provides students with basic knowledge on the use of smart tools important for driving decisions towards more sustainable ways of natural resource management in agriculture. Focus will be on Remote Sensing, Geographic Information Systems, Global Position Systems as tools for the acquisition, management, processing, analysis and display of spatial data and information. Multi-model mechanistic approaches and examples of multi-criteria Decision Supporting Systems will be also presented..

Unit IV - Organic agriculture principles, standards and regulations: the unit helps students get a better understanding of organic agriculture principles and of standards required for organic farming, including controls and certification, getting the details of the most recent European Union organic regulations, with an overview of the rules in place in Mediterranean countries and other important international contexts.

Unit V - Soil management and fertility: soil health is a fundamental aspect in organic farming. Students will understand how to manage the soil resource, from the conversion to the production phase. They will learn about the range of agronomic techniques and practices to be applied at farm level to maintain and improve soil fertility and quality. Focuses on crop organic management will help students gain practical skills.

Unit VI - Crops diseases and pests management: students will learn about existing options for pest and disease management of Mediterranean fruit crops in organic farming. Strategies will include crop choice and rotations schemes, preventive measures, biological control strategies, use of authorized Plant Protection Products (PPP). The main pests and diseases of olives, vines and citrus will be analyzed to give students a practical view of the issue.

Unit VII - Economics, marketing and policies: the unit develops an understanding of the economic and marketing aspects of the organic agri-food system, including policy issues. It provides knowledge and methods to approach the study of farm management, food system and marketing with a multi-stakeholder and supply chain perspective. Rural development policies are analysed, putting into evidence opportunities for the sustainable development of the agri-food sector and market.

Unit VIII - Food value chains: the unit aims at giving students a view on organic market and food from a farm to fork perspective. Specific attention is given on sustainable food value chains analysis and development. Students will learn how production, processing, post-harvesting and packaging influence food quality and safety and add value to food products.

Project on Social Capital: typologies of social capital, in forms of linkages among farmers and or other actors, are key elements for promoting organic agriculture. Students will engage in group activities, stakeholder analysis, territorial visits aimed at analyzing different forms of social capital, and learning ways for their promotion, development and management.

## SECOND-YEAR PROGRAMME - MASTER OF SCIENCE

During the second year, students who have successfully completed the first year, and have met all the prerequisites set by the Institute, draft a thesis based on experimental research work.

**Topics generally available for Master of Science theses are:**

- Management of cropping systems and soil fertility, quality of agricultural products and agricultural by-product recovery
- Biological control and natural biomolecules
- Sustainability of agricultural and natural systems
- Economic and market research
- Socio-economic impacts and impacts of support policies