CIHEAM
BARI

Master Courses

2025-26

Master in

"OPEN INNOVATION & YOUTH ENTREPRENEURSHIP IN THE MEDITERRANEAN AGRIFOOD SECTOR"

Academic Year 2025-2026

Master Description

The international I Level Master's program in **Open Innovation & Youth Entrepreneurship in the Mediterranean Agrifood Sector**, organized by **CIHEAM Bari** in collaboration with **LUM "Giuseppe Degennaro" University** and prestigious partners such as **Almacube** and **LUM Strategy Innovation**, offers an intensive one-year program aimed at training a new generation of innovation managers in the Mediterranean agrifood sector.

The program is structured into weekly modules that combine theory and practice, addressing key topics such as **Entrepreneurship and Startup Mindset**, **business model design for continuous innovation**, **agile methods and change management**, **Living Lab approach**, and **communication, marketing & storytelling**. Special emphasis is placed on **Trends & Innovation in Agrifood** and **sustainability**, exploring the impact of emerging technologies and sustainable practices across the agrifood value chain with a focus on health, energy efficiency, renewable resources, and circular economy principles.

Students can work on real business cases in collaboration with industrial partners, applying **Open Innovation methodologies** such as **Design Thinking**, to develop innovative solutions. The program culminates in an internship and the development and discussion of a final thesis, offering participants valuable hands-on professional experience.

At the end of the Master's program, graduates will be qualified for roles such as **innovation managers** and **innovation brokers**, capable of fostering technology transfer processes and managing innovative projects within organizations and startups. This program is designed to enhance young people's employability, encouraging their active involvement in the economic development of Mediterranean regions through an innovative and sustainable approach to the agrifood sector.

Master Program

MODULES		ECTS	DATES
1	Startup & Entrepreneurial Mindset	3.4	03 – 07 Nov
2	Open Innovation & Innovative Corporate Mindset	3.4	10 – 14 Nov
3	Innovation Ecosystems in Practice	3.4	19 – 25 Nov
4	Digital Innovation & Digital Transformation	3.4	01 – 05 Dec
5	Artificial Intelligence for Business	3.4	08 – 12 Dec
6	Innovation in Agrifood I	3.4	12 – 16 Jan
7	Innovation in Agrifood II	3.4	19 – 23 Jan
8	Innovation in Agrifood III	3.4	26 – 30 Jan
9	Business Model Design for Continuous Innovation	3.4	02 – 06 Feb
10	Business Model Design for Continuous Innovation – Practice with companies	3.4	09 – 13 Feb
11	Agile Methods & Change Management	3.4	16 – 20 Feb
PW 1	Project Work pt. 1 – Design Thinking approach	5.8	23 Feb – 20 Mar
PW 2	Project Work pt. 2 – Ideation, Prototyping & Validation phase	5.8	23 Mar – 29 May
12	Corporate Sustainability: Managerial & Financial Tools	3.4	11 – 15 May
13	Communication, Marketing & Storytelling	3.4	18 – 22 May
PW 3	Project Work pt. 3 – Business Case Development	4.2	01 – 26 Jun

Module Description

MODULE 1
STARTUP & ENTREPRENEURIAL MINDSET

GENERAL DESCRIPTION

This module explores the theoretical foundations and practical aspects of creating innovative startups in the Mediterranean agrifood sector. Students will develop essential skills to tackle entrepreneurial challenges, from defining innovation to building collaborative ecosystems that enhance success. Through simulations and practical activities, the module covers every stage of a startup's lifecycle: ideation, prototyping, launch, and growth. It also examines critical success factors and common pitfalls, alongside evaluating the roles of key actors such as governments, financial institutions, and educational systems. The goal is to promote a strategic, sustainable, and collaborative approach among students.

AIMS

- Equip students with tools and methodologies to analyze and understand the dynamics of innovation and entrepreneurship.
- Facilitate the practical application of theoretical concepts through realistic entrepreneurial simulations
- Examine the features of an effective entrepreneurial ecosystem, highlighting the roles and interactions of key stakeholders.
- Cultivate a critical mindset focused on problem-solving and identifying innovative opportunities.

LEARNING OUTCOMES

By the end of the module, students will be able to:

- ✓ Analyze and define key concepts of innovation and entrepreneurship applied to the agrifood sector.
- ✓ Plan and simulate every stage of a startup's lifecycle, from conception to expansion.
- ✓ Identify the primary success factors and challenges affecting the sustainability of innovative enterprises.
- ✓ Design collaborative relationships between public and private actors within entrepreneurial ecosystems.

MODULE 2
OPEN INNOVATION & INNOVATIVE CORPORATE MINDSET

GENERAL DESCRIPTION

Open Innovation, as theorized by Henry Chesbrough, represents a crucial strategic approach for companies aiming to integrate sustainability into their operations and promote economic growth in an increasingly ESG (Environmental, Social, Governance)-focused context. This model encourages collaboration among various entities, such as startups, universities, and organizations, to develop innovative solutions that address environmental and social challenges. By implementing Open Innovation practices, companies can access new ideas and technologies that not only enhance their competitiveness but also contribute to achieving sustainability goals and meeting stakeholder expectations regarding social responsibility. In this way, Open Innovation becomes a catalyst for sustainable innovation, enabling businesses to generate positive and lasting impacts within their ecosystem.

AIMS

- Highlight the importance of Open Innovation as a tool for addressing sustainability challenges and integrating ESG principles into business strategies.
- Introduce Open Innovation models and their role in promoting collaboration among different entities to develop innovative solutions.
- Explore methodologies for implementing Open Innovation practices that respond to environmental and social needs.
- Demonstrate how Open Innovation can contribute to creating sustainable business models capable of generating long-term value.

LEARNING OUTCOMES

By the end of the module, participants will be able to:

- ✓ Understand how Open Innovation principles and ESG aspects influence sustainable business practices.
- ✓ Recognize the importance of collaboration among companies, startups, and universities in the context of sustainable innovation.
- ✓ Identify opportunities to implement Open Innovation practices that address sustainability challenges.
- ✓ Design innovative business models that integrate ESG principles and promote responsible economic growth.

MODULE 3
INNOVATION ECOSYSTEMS IN PRACTICE

GENERAL DESCRIPTION

This module provides a practice-oriented introduction to innovation ecosystems, focusing on their structure, key actors, and functioning at local and national levels. Through hands-on activities, students work on mapping the innovation ecosystems of their countries, identifying the main stakeholders involved in innovation and entrepreneurship, including public institutions, startups, universities, research centers, investors, and support organizations.

The module adopts a systemic perspective, helping students understand how interactions between actors, policies, infrastructures, and networks shape innovation processes. The goal is to develop the ability to analyze ecosystems critically and to strategically position projects and entrepreneurial initiatives within them.

AIMS

- Introduce practical tools and methodologies for mapping and analyzing innovation ecosystems.
- Enhance understanding of stakeholder roles and ecosystem dynamics.
- Promote a systemic approach to innovation and entrepreneurship.

LEARNING OUTCOMES

By the end of the module, students will be able to:

- ✓ Identify the key components and actors of an innovation ecosystem.
- ✓ Map and analyze innovation ecosystems using structured tools.
- ✓ Assess strengths, gaps, and opportunities within different national or regional contexts.
- ✓ Apply ecosystem analysis to support the development of innovative and entrepreneurial initiatives.

MODULE 4
DIGITAL INNOVATION & DIGITAL TRANSFORMATION

GENERAL DESCRIPTION

The course introduces the fundamental concepts of digital innovation and digital transformation, examining how digital technologies reshape industries, business models, organizational structures, and managerial capabilities. Through a combination of theoretical sessions, case analyses, and practical workshops, students explore the sources of entrepreneurial innovation, the characteristics of digital innovation, the strategic role of data, and the dynamics of the Fourth and Fifth Industrial Revolutions, including the paradigms of Industry 4.0 and Industry 5.0. Particular emphasis is placed on the cultural, organizational, and technological changes required to design and implement an effective digital transformation strategy. The course concludes with a Project Work in which students assess the digital maturity of a real company and define its innovation priorities and transformation roadmap.

AIMS

- Provide students with a solid understanding of the theoretical foundations of digital innovation and digital transformation.
- Enable them to understand how technologies and data support new managerial approaches, organizational structures, and mechanisms of value creation.
- Develop the ability to interpret the challenges and opportunities associated with digital change.
- Support the formulation of coherent and actionable priorities for digital innovation and transformation.

LEARNING OUTCOMES

By the end of the course, students will have developed the ability to

- ✓ Distinguish conceptually and practically between digital innovation and digital transformation, understanding how they interact and complement each other within contemporary organizations.
- ✓ analyze technological, social, and market trends that shape innovation trajectories and evaluate the impact of Industry 4.0 enabling technologies and Industry 5.0 principles on business processes and business models.
- ✓ Understand the organizational, cultural, and managerial adaptations required for companies to evolve into genuinely digital-first organizations.
- ✓ Conduct structured assessments of digital maturity, to identify relevant opportunities for innovation, and to define appropriate priorities for digital transformation.

MODULE 5
ARTIFICIAL INTELLIGENCE FOR BUSINESS

GENERAL DESCRIPTION

Artificial Intelligence is increasingly embedded across business functions, shaping how organizations operate, innovate, and compete. For young entrepreneurs, understanding AI is not simply a technical advantage but a foundational element for designing future-oriented ventures and informed strategic choices.

This course offers a structured overview of AI's role within contemporary business ecosystems, providing conceptual clarity, methodological frameworks, and practical perspectives. It supports participants in developing a coherent understanding of how AI can strengthen internal organizational processes and, at the same time, inform and enhance the design of external offerings, including new products and services. Through an integrated approach, the course prepares future entrepreneurs to engage with AI in a competent, responsible, and opportunity-oriented manner.

AIMS

- Introduces Artificial Intelligence from a business-oriented perspective, with a focus on critical and responsible use, particularly of Generative AI.
- Explores how AI can be understood, evaluated, and strategically applied within organizations, rather than focusing on technical development.
- Provides an overview of the key conceptual and organizational aspects of AI adoption.
- Analyses the opportunities and limitations of leading GenAI tools in relation to business practices and innovation.
- Equips young entrepreneurs with essential AI knowledge and practical frameworks to support informed decision-making and strategic integration of AI.

LEARNING OUTCOMES

- ✓ Understand the conceptual foundations of AI and its main categories, including Generative AI, in business contexts.
- ✓ Analyze current AI trends, innovations, and debates, assessing opportunities, risks, and societal impacts.
- ✓ Evaluate how and where to integrate AI within organizations to create value and improve processes and offerings.
- ✓ Use key Generative AI tools for business applications, applying effective prompting techniques.
- ✓ Understand the main ethical, regulatory, and privacy implications related to AI adoption.

MODULE 6, 7 and 8
INNOVATION IN AGRIFOOD I, II and III - TRENDS IN AGRIFOOD

GENERAL DESCRIPTION

The module is structured as a combination of lectures, study visits, and fieldwork, offering a practical and multidisciplinary approach. During this module, various professors will take turns addressing specific topics, aiming to explore in depth the main aspects of the agrifood sector from an innovation perspective. Technical visits will be organized at partner companies of the master's program and entities that directly apply the innovations discussed during the lectures.

The main topics covered include:

- Food Trends and Food Innovations, with a particular focus on trends and new technologies in the Agrifood sector.
- Value Chain and Short Chain, analyzing local agricultural markets, short supply chain models, and the reality of Farmer Markets in Italy.
- Transition of Food Systems, with a focus on Food Policy and food policies for sustainable development.
- Digitalization in Agriculture, Precision Farming, and Decision Support Systems aims at improving efficiency and productivity in agricultural enterprises.
- Soil Fertility, Organic Farming, and Phytosanitary Aspects, exploring sustainable and innovative practices for soil management and crop health
- Innovations in Sustainable Water Resource Management and Agrivoltaics, evaluating integrated solutions for environmental protection and natural resource optimization.

AIMS

The module aims to highlight the key aspects affecting the agrifood sector, addressing them from an innovation perspective across all major fields. Students will have the opportunity to understand how emerging technologies and food policies can transform supply chains, support sustainability, and promote new entrepreneurial models.

- Understand the main dynamics and opportunities open innovation offers in the agrifood sector.
- Analyze challenges related to food security, climate change, and sustainability in the Mediterranean context.
- Provide students with tools and methodologies to develop innovative entrepreneurial ideas, from concept to prototyping, based on the analysis of current agrifood trends.
- Promote knowledge of emerging technologies, such as blockchain, artificial intelligence, and precision farming, applied to the agrifood sector.
- Encourage collaboration among key players in the agrifood system: businesses, public institutions, non-governmental organizations, and local communities.

LEARNING OUTCOMES

By the end of the module, students will be able to:

- ✓ Analyze and interpret key innovation trends in the agrifood sector, with a focus on the Mediterranean context.
- ✓ Identify and evaluate innovative entrepreneurial opportunities that address concrete problems in the agrifood sector.
- ✓ Develop strategies integrating emerging technologies to improve productivity and sustainability in agrifood supply chains.
- ✓ Critically reflect on the role of public policies and cross-sectoral partnerships in developing resilient and sustainable entrepreneurial ecosystems.

MODULE 9 and 10
BUSINESS MODEL DESIGN FOR CONTINUOUS INNOVATION

GENERAL DESCRIPTION

The course spans over two weeks and is structured into four parts, combining lectures with hands-on team workshops and practical work with real companies. The first part covers the fundamentals of strategic innovation and methodologies for business model design, including topics such as strategic market orientation, sources of entrepreneurial ideas, innovation processes, and entrepreneurial management. The second part focuses on design-thinking tools for innovative business models (e.g., business model canvas, value proposition canvas), the evolution of business models in Industry 4.0, and the patterns of 4.0 business model design. Key concepts include the 4.0 business model canvas, unbundling and long tail business models, two-sided and multi-sided platforms, epicenters of innovation, ideation, and prototyping. The third part emphasizes practical application, with team projects aimed at creating innovative business models for startups or established companies (corporate entrepreneurship). The fourth part focuses on real-time applications of the lessons learned in the previous parts of the module, where students will be required to identify areas of improvement of business models of existing companies.

AIMS

The course aims to:

- ❖ Explore the phases, challenges and tools for developing innovative business models.
- ❖ Map and analyze the structure of business models.
- ❖ Study advanced business model design tools suited to complex entrepreneurial contexts.
- ❖ Apply the methodologies on real cases by interacting with existing companies and providing them with elements to improve their business models.

LEARNING OUTCOMES

Students will gain an understanding of business models and their components. By the end of the course, they will be able to address the challenges companies face when designing and implementing new models, particularly in response to technological changes or sectoral shifts. Students will be equipped to create innovative models for established companies or startups, assess the conditions for

success, and evaluate how different models can reshape competitive dynamics. They will also learn to communicate business model features and their innovative elements effectively and professionally.

MODULE 11
AGILE METHODS & CHANGE MANAGEMENT

GENERAL DESCRIPTION

In a rapidly evolving global landscape marked by technological disruption and organizational transformation, traditional work methods are no longer sufficient. Agile methodologies offer a vital framework for navigating uncertainty, fostering resilience, and turning challenges into opportunities. Agility is more than a skill, it is a mindset that enables professionals to adapt quickly, solve complex problems, collaborate effectively, and embrace continuous learning. In the agrifood sector, this adaptability is essential for addressing challenges like climate change, technological advancements, volatile markets, and shifting consumer demands. By adopting agile approaches, entrepreneurs, scientists, and farmers can pivot strategies, integrate innovative solutions, and thrive in an unpredictable environment, driving sustainable growth in one of the world's most critical industries.

AIMS

- Deconstruct traditional work paradigms to foster an agile and flexible approach.
- Deliver advanced skills for managing complexity and uncertainty.
- Develop a mindset oriented toward continuous learning and iterative improvement.
- Provide practical tools to implement agile methodologies in agrifood contexts.
- Explore the philosophical and applied foundations of innovative methodologies.

LEARNING OUTCOMES

By the end of the module, participants will be able to:

- ✓ Critically analyze personal and organizational work approaches.
- ✓ Apply agile methodologies to complex professional scenarios.
- ✓ Develop strategies for rapid adaptation and continuous learning.
- ✓ Mitigate cognitive biases that hinder innovation.
- ✓ Create collaborative frameworks to enhance team resilience.
- ✓ Design iterative processes to address emerging challenges in dynamic contexts.

MODULE 12
CORPORATE SUSTAINABILITY: MANAGERIAL & FINANCIAL TOOLS

GENERAL DESCRIPTION

This module explores the intersection of corporate strategy and sustainability, focusing on managerial and financial tools essential for integrating sustainable practices into business operations. It highlights the strategic shift from shareholder value to stakeholder value, providing insights into corporate sustainability frameworks, stakeholder engagement, and materiality assessment processes. In addition, it focuses on operations management as a source of control and performance and discusses the concept of controlling the quality of products and services. By emphasizing the triple bottom line approach (economic, environmental, and social dimensions), the module prepares students to address global sustainability challenges through innovative management strategies, developing an original social innovation project.

AIMS

- Provide a comprehensive understanding of corporate sustainability, including its evolution beyond CSR, and its alignment with sustainable development objectives.
- Introduce managerial and financial tools for implementing, financing, and reporting sustainable strategies, including stakeholder engagement, materiality assessment, and sustainability frameworks.
- Develop knowledge of operational processes, quality management, and control systems to support measurable and sustainable corporate performance.

LEARNING OUTCOMES

Students will learn to:

- ✓ Apply stakeholder engagement and materiality analysis to integrate sustainability dimensions (economic, social, environmental) into corporate strategy.
- ✓ Design and develop Social Innovation Projects, understanding their strategic and operational implications.
- ✓ Understand operations management models, including transformation processes, operational typologies, and quality management.
- ✓ Analyze how operations management and control systems contribute to organizational competitiveness and sustainability, comparing strategies and tactics across different contexts.

MODULE 13
COMMUNICATION, MARKETING & STORYTELLING

GENERAL DESCRIPTION

This module focuses on the development of effective value propositions and marketing strategies in the agrifood sector, combining tradition and innovation to respond to evolving market demands. It introduces key concepts such as market research, consumer behaviors, branding, communication, and digital marketing tools. The module also examines the agrifood supply chain within a sustainability framework, highlighting ethical, environmental, and social dimensions. Practical activities, including laboratory sessions, company visits, and a team project, connect theory with real-world application and foster collaboration, critical thinking, and problem-solving skills.

AIMS

- Provide students with the knowledge, skills, and practical tools to develop innovative and sustainable marketing strategies, with a specific focus on the agrifood sector.
- The knowledge and tools to develop effective value propositions, with a focus on the agrifood sector.
- The integration of tradition and innovation to create sustainable marketing strategies.
- A comprehensive understanding of the entire marketing process, from consumer behaviors to branding and communication.
- The role of supply chain actors and their contributions to sustainable value creation.
- Laboratory activities, company visits, and real-world applications.
- Teamwork and practical problem-solving skills through a collaborative final project.

LEARNING OUTCOMES

By the end of the module, students will be able to:

- ✓ Analyze market dynamics, consumer behaviors, and agrifood trends to identify sustainable marketing opportunities.
- ✓ Develop value propositions and marketing strategies that integrate tradition, innovation, branding, communication, and storytelling.
- ✓ Understand and apply digital tools and channels to enhance visibility, engagement, and market reach.
- ✓ Analyze the agrifood supply chain and the role of its actors in sustainable value creation.
- ✓ Apply knowledge through hands-on activities and team-based projects, demonstrating practical problem-solving and collaboration skills.

PROJECT WORK / INTERNSHIP

GENERAL DESCRIPTION

The Project Work represents the core experiential component of the International I Level Master in *Open Innovation & Youth Entrepreneurship in the Mediterranean Agrifood Sector* at CIHEAM Bari. Conceived as a curricular internship, it is developed in close collaboration with partner companies and organizations, with the objective of addressing real business challenges through the design of innovative, sustainable, and market-oriented solutions.

This phase embodies the Master's learning-by-doing approach, allowing students to work directly with companies, stakeholders, and experts from the agrifood ecosystem. The Project Work integrates methodological rigor with practical experimentation, enabling participants to engage with complex innovation processes while responding to concrete needs emerging from the sector.

The Project Work is structured around the Open Innovation paradigm, with a strong methodological focus on the Design Thinking approach. This framework guides students in exploring innovation challenges from both a human-centric and planet-centric perspective, fostering solutions that are not only technically and economically viable, but also socially and environmentally responsible.

Through Design Thinking, students are guided across the key phases of the innovation process. They begin by deeply understanding company contexts and stakeholder needs through qualitative research activities such as interviews, field observations, and co-creation workshops. Insights generated during this phase are translated into ideas and concepts that are progressively refined through rapid prototyping, testing, and validation cycles, ensuring alignment with real-world constraints and opportunities.

The Project Work unfolds through an iterative and structured pathway, punctuated by regular milestones, reviews, and interactions with partner companies. Students work in multidisciplinary teams and are continuously supported by a dual coaching system:

- **Innovation Coaches**, who guide teams on methodology, teamwork, problem framing, and innovation processes.
- **Technical-scientific Coaches from CIHEAM Bari**, who provide sector-specific expertise, ensuring scientific soundness, technical feasibility, and coherence with agrifood systems and sustainability principles.

In parallel with the core Project Work activities, students take part in a rich set of thematic laboratories and complementary learning experiences, designed to strengthen transversal and professional skills essential for innovation-driven careers. These include Team Building activities, Company Meetings, Pitching Labs, Public Speaking and Storytelling sessions, Soft Skills Empowerment workshops, Alumni Talks, and Inspirational Labs with professionals, entrepreneurs, and innovators. Together, these activities reinforce personal development, leadership, communication effectiveness, and professional awareness.

The Project Work culminates in the development and presentation of a final business case, where each team delivers a comprehensive and actionable proposal to partner companies and stakeholders, demonstrating the entire innovation journey from problem identification to solution design and validation.

AIMS

The Project Work aims to:

- Develop advanced competencies in open innovation methodologies, enabling students to address complex business challenges through structured, human-centered approaches.
- Strengthen collaboration between academia, companies, and innovation ecosystems, fostering knowledge exchange and co-creation.
- Enhance entrepreneurial, leadership, and teamwork skills, preparing students to operate in multidisciplinary and dynamic professional environments.
- Promote the design of sustainable, ethical, and impactful solutions, aligned with environmental and social priorities in the agrifood sector.
- Equip students with practical and professional skills for careers in innovation management, entrepreneurship, consultancy, and corporate innovation.

LEARNING OUTCOMES

By completing the Project Work, students will be able to:

- ✓ analyze and frame complex innovation challenges in the agrifood sector using structured research and stakeholder analysis methods.
- ✓ Design, prototype, and validate innovative solutions aligned with user needs, company strategies, and sustainability goals.
- ✓ Apply Design Thinking methodologies in real organizational contexts, translating theory into practice.
- ✓ Make evidence-based decisions by collecting and interpreting qualitative and quantitative feedback.
- ✓ Work effectively in multidisciplinary teams, demonstrating leadership, collaboration, and project management skills.
- ✓ Communicate project outcomes clearly and convincingly through professional presentations and business cases.

KEY HIGHLIGHTS OF THE PROGRAM

- Curricular internship experience developed in close collaboration with partner companies and organizations.
- Continuous coaching and mentoring, combining innovation expertise and technical-scientific guidance from CIHEAM Bari.
- Integrated learning ecosystem, combining Project Work activities with labs on pitching, communication, soft skills, and professional development.
- Strong sustainability focus, addressing ethical, environmental, and social dimensions of innovation in agrifood systems.
- Final business case presentation, showcasing concrete, actionable solutions delivered to companies and stakeholders.