Mediterranean Futures: Addressing Global Challenges

Honor Course of the Arab-Mediterranean Campus for Undergraduate Students

---

Course Overview

The Mediterranean is a key region for addressing some of the most pressing global challenges, from economic and environmental transitions to technological and social innovation. This interdisciplinary course explores the future of the Mediterranean through the lens of various thematic areas: entrepreneurship, environmental sustainability, artificial intelligence, innovative agriculture, circular economy, space economy, and social innovation.

Through a multidisciplinary approach, participants will acquire both theoretical and practical tools to analyze global trends and their impact on the region, with particular focus on Italy-MENA (Middle East & North Africa) relations, emerging technologies, and sustainable development strategies.

Learning Objectives

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

➢ Analyze major global trends and their impact on Mediterranean regional relations.

➢ Understand innovation dynamics across sectors, from agriculture to space economy.

➢ Explore the role of artificial intelligence, nature-based solutions, and the circular economy in sustainable development.

➢ Evaluate strategies of social innovation, social entrepreneurship, and sustainable business in the Mediterranean.

➢ Deepen their understanding of environmental protection and technological innovation for the future of the region.

➢ Improve their leadership skills, becoming capable of driving change, to create impact in society and to understand the future of the Mediterranean region.

Course Editions:

➢ Edition 1 (January 2026): Luiss Guido Carli and University of Naples "Federico II"

➢ Edition 2 (July 2026): Luiss Guido Carli and Ca' Foscari University of Venice

➢ Edition 3 (July 2027): Luiss Guido Carli and University of Bari Aldo Moro

➢ Edition 4 (July 2028): Luiss Guido Carli and Politecnico di Milano

➢ Edition 5 (July 2029): Luiss Guido Carli and University of Bologna

---

Course Format

The five editions of the Honor Program will include each year **100 undergraduate students** from the MENA region, who will participate in 40 hours of online training. Among them, the top **50 students** will be selected to take part in the in-person component in Italy, consisting of one week at Luiss University in Rome and one week at one of the 11 Italian partner universities.

➤ **Phase 1. Asynchronous Online Component**: 40 hours. The online component will be available at the "Federica Web Learning Platform" at the following link.....

➤ **Phase 2. In-Person Component**: 2 weeks at Luiss and another Italian university member of the Arab-Mediterranean Campus consortium. Students can access the second phase of the course according to the requirements listed below:

Requirements to access the Second Phase of the course

➤ Completion of the online course (attendance monitored via Federica Web)

➤ Results of the multiple-choice test at the end of each lesson and results of the final multiple-choice test covering the topics of the entire course

---

Admission Requirements

➤ Be enrolled in the last year of an undergraduate program at a university in a MENA country. The countries belonging to the MENA region are: Algeria, Saudi Arabia, Bahrain, Djibouti, United Arab Emirates, Egypt, Jordan, Iran, Iraq, Israel, Lebanon, Libya, Morocco, Oman, Palestine, Qatar, Syria, Somalia, Tunisia, and Turkey.

➤ Have at least a B2 level of English proficiency

Selection Criteria

• Academic performance (grades and exams)

• Motivation and attitude

• CV

Required Documents

• Valid ID document or passport

• Certificate of enrollment in the last year of an undergraduate program

• Certificate of English language proficiency (upper intermediate - B2 - or above)

• Transcript of records

• CV

Recognition

Students who complete the entire course and pass the final exam will be awarded a micro-credential.

Students who complete the online part of the course only will be awarded a certificate of attendance.

Course Units: "Mediterranean Futures: Addressing Global Challenges"

Business, Entrepreneurship and Legal-Political Development

❖ **Luiss (2 hours) – Global Trends and EU-MENA Relations**
This introductory unit analyzes major global trends and their impact on Mediterranean economies, with particular attention to EU–MENA relations. It explores key economic and political drivers of regional cooperation, emerging challenges, and development opportunities in the Mediterranean context.

   ➢ *Global Trends* - Prof. Raffaele Marchetti

   ➢ *EU–MENA Relations and MENA Trends* - Prof. Luigi Narbone

Environmental Protection

❖ **Ca' Foscari (3 hours) – Environmental Protection: The Challenges of Environmental Protection**
This unit addresses current environmental challenges in the Mediterranean such as environmental pollution and the impacts of climate change on water resource management and biodiversity loss. Environmental governance tools and mitigation and adaptation policies will be examined.
Prof. Antonio Marcomini

❖ **Politecnico di Milano (3 hours) – Interpreting Environmental Protection Today**
Focus on design and technological solutions for sustainability and resource efficiency:

   ➢ *Sustainable Technological Solutions for Buildings in Hot Climates* – Prof. Claudio Del Pero & Prof. Harold Huerto

   ➢ *Managing the Water-Food Nexus in a Changing World* – Prof. Beatrice Cantoni

   ➢ *Greening Cities in Arid Climates* – Prof. Maria Chiara Pastore

❖ **Milano Bicocca (3 hours) – Nature-Based Solutions for Environmental Remediation**
This unit presents innovative applications for bioremediation of contaminated environments and ecosystem restoration, both terrestrial and marine.

   ➢ *The power of MICROBES for environmental cleanup: synergy between bioremediation and circular economy* – Prof. Andrea Franzetti

   ➢ *The power of GREEN for environmental cleanup: phytoremediation in action* – Prof. Sandra Citterio

   ➢ *Rewilding the Future: Innovative Paths in Restoration Ecology"* – Prof. Rodolfo Gentil

Health and Innovative Agriculture

❖ **University of Bari (3 hours) – Innovation and Development in Agri-Food Systems**
Explores how technological innovation is transforming Mediterranean agri-food sectors:

   ➢ *Crop Resistance to Biotic and Abiotic Stresses* – Prof. Domenica Nigro

   ➢ *Orchard Monitoring for Smart Agriculture* – Prof. Pasquale Losciale

> ➢ *Agriculture and Climate Adaptation/Mitigation* – Prof. Marco Pantaleo

❖ **University of Milan (4 hours) – Sustainable Approaches for Agriculture in the MENA Region**
Focus on sustainable agriculture technologies, food security, nutrition, and innovation:

> ➢ *Food Security: Threats and Challenges* – Prof. Stefano Corsi

> ➢ *Agroecology for Innovative Agriculture* – Dr. Pietro De Marinis

> ➢ *Bio-Based Approaches: Biofertilizers and Biostimulants* – Prof. Eleonora Rolli

> ➢ *Plant Biotechnology and Planetary Boundaries* – Prof. Carlo Pozzi

❖ **University of Parma (4 hours) – Food Innovation in Italy**
A journey through Italian agri-food innovation: processes, policies, production, and traditions:

> ➢ *Global Food Law* – Prof. Valeria Paganizza

> ➢ *Economics of Sustainable Food Systems* – Prof. Mario Veneziani

> ➢ *Human Nutrition* – Prof. Beatrice Biasini

> ➢ *Food Technologies* – Prof. Marcello Alinovi

Social Innovation and Poverty Alleviation

❖ **Università Cattolica (4 hours) – Innovative Business Models for Social Inclusion**
Explores how social innovation can reduce poverty through social entrepreneurship and inclusive, sustainable business strategies:

> ➢ *Social Entrepreneurship, Innovation and Poverty Alleviation* – Dr. Andrea Sottini

> ➢ *Inclusive Business Models for Poverty Alleviation* – Dr. Giacomo Ciambotti

❖ **University of Ferrara (4 hours) – Circular Economy and Human Development**
Examines the circular economy as a driver for equitable, sustainable development, including practical cases in waste management, recycling, and industrial regeneration:

> ➢ *Policies for Circularity and Human Development* – Prof. Massimiliano Mazzanti

> ➢ *Eco-Innovation for the Circular Economy* – Prof. Nicolò Barbieri

---

Space Economy and Artificial Intelligence

❖ **Federico II (2 hours) – Artificial Intelligence for Public Administration**
Covers AI applications in public sector digitalization, including digital twins and international/MENA case studies:

> ➢ *Digital Public Administration* – Prof. Fortunato Musella, Valentina Reda

> ➢ *Digital Twins* – Prof. Luigi Rullo, Prof. Serena Fraiese

❖ **University of Modena and Reggio Emilia (4 hours) – Automotive and Artificial Intelligence**
Focuses on autonomous driving and its technical, ethical, legal, and economic dimensions for future cities.
Topics include:

> ➢ Basics of autonomous vehicles

- ➢ Computer vision and perception
- ➢ AI in autonomous driving
- ➢ Control theory
- ➢ Cooperative and connected vehicles
- ➢ Internet of Vehicles/Cities
- ➢ Ethical, legal, and economic implications

Prof. Paolo Burgio

❖ **University of Bologna (4 hours)** – **Space Economy and Technological Innovation** - **To be confirmed**