



# Magistrale LM-76

# Economics and Technologies of Sustainability (ETS)

F7603Q

Prof. Dr. rer. nat. Heiko Lange

Dipartment of Earth and Environmental Sciences U1, III piano, studio 3017

receptions: Thursdays between 10 am and 6 pm, online or in person,

otherwise after scheduling an apointment via email

email: heiko.lange@unimib.it





# Information Study Plans Guide for Course Selections 05-11-25

Magistrale LM-76

Economics and Technologies of Sustainability (ETS)



## **Study Plan - Formal Aspects**



#### **APPROVAL**

The study plan is approved by the Teaching Coordination Council of the program.

Students can only take exams for courses listed in their study plan. The study plan must comply with the required number of credits, constraints, and prerequisite rules established by the program's teaching regulations.

#### **TIMELINES & DEADLINES**

November 3<sup>rd</sup> - 21<sup>st</sup>, 2025 March 3<sup>rd</sup> - 20<sup>th</sup>, 2026

January 8th to 23rd, 2026

**RESERVED EXCLUSIVELY** for students enrolled in the FIRST YEAR who were unable to submit their study plan between November 3<sup>th</sup> and 21<sup>st</sup>, 2025, as they did not yet achieve the bachelor's degree.

#### LINKS

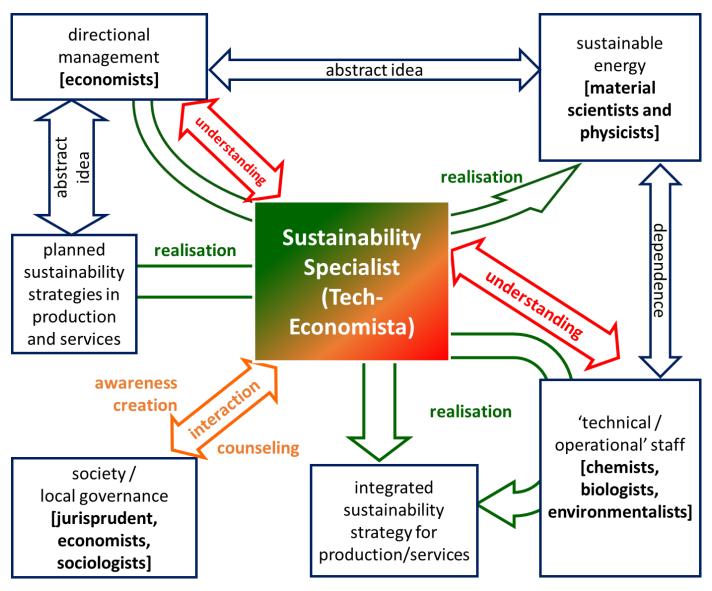
https://elearning.unimib.it/course/section.php?id=306356



# New professional figures needed....



Sustainability Specialist
(a 'Tech-Economista')



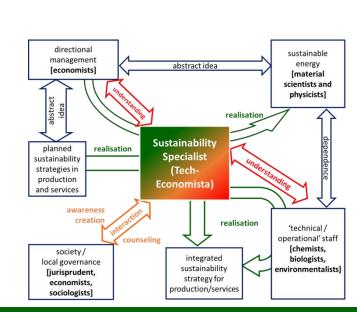


## **Professional activities post-laurea**



#### EXPERT FOR EVALUATING ECONOMIC AND SOCIOLOGIC IMPACTS OF SUSTAINABILITY IMPLEMENTATIONS (ECONOMICS)

- Operational activity in the field of description, quantification, design, implementation and valorization of environmental sustainability for a company or a public body or an organization.
- Coordination of work groups designed to develop a strategies aimed at implementing environmental sustainability in specific contexts determined by the surrounding realities.
- Data processing and analysis of resource markets and product markets, using models and simulations.
- Application of practices currently used in the field of sustainability evaluation and certification, and development of novel methods and protocols to describe and quantify the impact of sustainable measures.
- Evaluating the potential offered by new technologies.
- Freelancer providing consultancy on the description, valorization and certification of sustainability in both the private and the public sector.



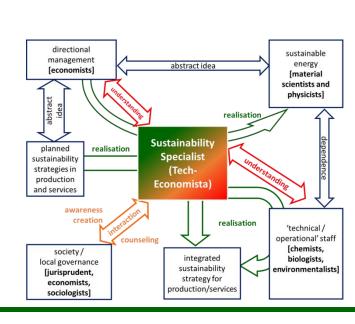


## **Professional activities post-laurea**



#### EXPERT FOR IMPLEMENTING GREEN PRODUCTION AND SUSTAINABLE RESOURCE EXPLOITATION (PRODCUTION)

- Design processes for production circularity, such as recycling and reuse, with an end-of-waste approach, including an in-depth understanding of raw materials and their production cycle.
- Calculation and reduction of the ecological footprints of various production scenarios.
- Process and product design through Life Cycle Assessment approaches.
- Implementation of sustainable strategies for the production of goods or materials.
- Cost-benefit analysis of the use of circular technologies in production.
- Assessment of resource choices (e.g., new vs. recycled).
- Evaluation of long-term resource availability, implications on production, etc.



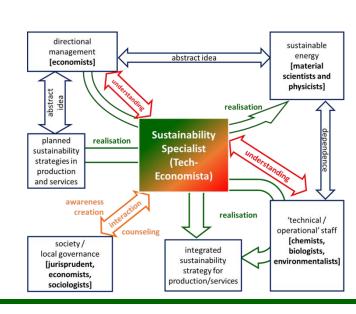


# **Professional activities post-laurea**



#### **EXPERT FOR IMPLEMENTING GREEN ENERGY ASPECTS (ENERGY)**

- Optimization of energy management in the public and private sectors.
- Evaluation of the implementation of sustainable energy in corporate or public settings.
- Energy assessment of production processes.
- Calculation and reduction of the energy ecological footprint.
- Cost-benefit analysis of energy changes within specific contexts.





# Courses intended for professional figure 'ECONOMICS'



#### 1<sup>st</sup> year

Laboratory of Entrepreneurship and Business Planning (6 ECTS)

#### 2<sup>nd</sup> year

Sustainability Scenarios & Modelling (8 ECTS)

Innovation and Technology Management (8 ECTS)

Socio-economic vs. Scientific Aspects of Local Sustainability Measures and Industrial Plants (8 ECTS)

Laboratory of Data Management and Synthetic Indicators for Sustainability (6 ECTS)



# Courses intended for professional figure 'PRODUCTION'



#### 1<sup>st</sup> year

Laboratory of Understanding Sustainable Management of Industrial Water (6 ECTS)

Laboratory of Urban Mining – Opportunities and Limits (6 ECTS)

### 2<sup>nd</sup> year

Technologies for Sustainable Production (8 ECTS)

Technologies for Circular Economy (8 ECTS)

Safe and Sustainable by Design (8 ECTS)

Laboratory of Towards Carbon Negativity (6 ECTS)



# Courses intended for professional figure 'ENERGY'



#### 1<sup>st</sup> year

Laboratory of Renewable Energy Technologies (6 ECTS)

#### 2<sup>nd</sup> year

Energy Storage and Conversion: from Technologies to Applications (8 ECTS)

Renewable Energy Sources: from Technologies to Applications (8 ECTS)

Physics for Sustainable Energy (8 ECTS)

Laboratory of Towards Carbon Negativity (6 ECTS)



# Courses compatible with all professional figures



#### 1<sup>st</sup> year

Laboratory of Sustainability and Biodiversity (6 ECTS)

Laboratory of Sustainability and One Health (6 ECTS)

Laboratory of Past, Present and Future of Certifying Sustainability (6 ECTS)

#### 2<sup>nd</sup> year

Laboratory of Urban planning and policies (6 ECTS)

Laboratory of Human Ecology (6 ECTS)

Laboratory of Communicating Sustainability (6 ECTS)





#### Please note:

Your study plan needs to be balanced and reflect a choice that will clearly help you to shape a meaningful professional figure in the context of sustainability.

The members of the commission called 'Student Petitions' can give you a hand in terms of making such an equilibrated choice. You can find their details on the elearning page dedicated to ETS' commissions.





# Grazie!

didattica.ETS@unimib.it

heiko.lange@unimib.it