

Bioeconomics (4 CFU)

Coordinatore: Emanuele Blasi

Additional Instructor: Clara Cicatiello

Objectives: This course surveys the most critical topics in environmental economics approach, proposing the bio-economics framework as a different way to study “sustainability” in a territory. The interactions among firms, value chains, people and communities will be defined as “wellbeing” drivers following the Georgescu-Roegen stocks and flows approach. Topics covered in this course include the natural capital assessment and the approach to ecosystems services’ evaluation, environmental economics solutions in international policy agenda, indicators for a rapid appraisal of systems’ sustainability and the evaluation of projects and policies in agri-food systems.

Program:

n°	Module	Instructor
1	Bioeconomy meaning and definitions, Bio-based economy; bio-economy and bioeconomics; Economic growth and development, Georgescu-Roegen's and Herman Daly's perspectives, weak and strong sustainability concepts; Georgescu-Roegen bioeconomics theory and the bio-economic system features; Production and consumption processes and patterns; the stock and flow model.	Emanuele Blasi
2	Private, public goods and market failure, the environmental economics "solutions"; Environmental impact, natural resources' exploitations, pollution and wellbeing, how "humanity" would choose to manage these matter. Political agenda worldwide and in Europe. Working group	Emanuele Blasi
3	The bio-based economy in Europe; natural capital and ecosystem services narrative; instruments and policies for natural resources; The Circular Economy, from ecology (biotic) to "industrial" ecology (abiotic); what about social sphere and wellbeing?	Emanuele Blasi
4	Assessing the sustainability of economic systems under a bioeconomic perspective: concepts of environmental, social and economic sustainability. How to use indicators to measure environmental, social and economic sustainability: general information on the use of indicators, baseline assessments and sources of data.	Clara Cicatiello
5	The bioeconomics theory as a framework to evaluate policies and practices in sustainable development programs: case studies from international agencies and research networks Indicators to measure sustainability in the agri-food systems: review of main indicators used in literature to assess the sustainability of food systems; relations between stocks and flows in bioeconomic systems	Clara Cicatiello
6	Case studies of sustainability assessment in food systems: i) environmental sustainability (Life Cycle Assessment); ii) global	Clara Cicatiello

	sustainability (SAFA tool); iii) sustainability of the food chain channels; iv) the issue of food waste.	
7-8	Workshop and exam	Emanuele Blasi & Clara Cicatiello

Teaching method: Class; working groups;
Semester: 2nd semester, Academic Year 2019-20.
Final examination: oral exposition