



# UNIVERSITÀ DI PISA

## BIOECONOMY

GIANLUCA BRUNORI

Anno accademico

2023/24

CdS

SISTEMI AGRICOLI SOSTENIBILI

Codice

540GG

CFU

6

Moduli  
BIOECONOMY

Settore/i  
AGR/01, AGR/01

Tipo  
LEZIONI

Ore  
64

Docente/i  
GIANLUCA BRUNORI  
MARIARITA PIEROTTI

### Obiettivi di apprendimento

#### *Conoscenze*

To acquire the main theoretical and methodological tools of the discipline and their application, with particular reference to the primary sector.

#### *Modalità di verifica delle conoscenze*

Work in the classroom, written assignments, active participation.

#### *Capacità*

Analytical skills, Synthesis skills, strategic capacity

#### *Modalità di verifica delle capacità*

Work in the classroom, written assignments, active participation.

#### *Comportamenti*

Active participation to the course in the classroom

#### *Modalità di verifica dei comportamenti*

direct monitoring

### Programma (contenuti dell'insegnamento)

1. **Elements of ecological economics.** Resources; funds and services vs stocks and flows; Natural capital, ecosystem services, socio-ecological systems.
2. **The concept of bioeconomy.** Definition of bioeconomy. The components of the bioeconomy: food, pharmaceutical, bioplastics, energy. The controversies related to the concept of bioeconomy. The principles of operation of the bioeconomy.
3. **Bioeconomy technologies and their impact.** Technological, organizational and social innovation.
4. **The subjects of the bioeconomy:** Agrotech companies; The primary sector; The biomass processing industry; retailers; civil society; consumers.
5. **The functioning of the bioeconomy:** Horizontal coordination: cooperatives and consortia. Vertical coordination: the supply chain. Supply chain analysis. The management of the supply chain. Global supply chains, local supply chains, supply chain governance.
6. **Material flows and intangible flows in the bioeconomy.** The concept of traceability and its uses. The transparency of supply chains and its implications. The impact measure of biomass transformation. The circular economy.
7. **Biosecurity.** The definitions of biosecurity. The factors that generate vulnerabilities. Risk management.
8. **Management,**  
The course is an introduction to the basic concepts of modern management. The course provides descriptions of the main functions of management, and the drivers of performance, and of the most relevant practices.
9. **Financial accounting,**  
The course is an introduction to the basic concepts underlying financial accounting systems. The course provides an understanding of the accounting recording process and the preparation of financial statements.



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10. *Managerial accounting,*

This course is an introduction to the basic concepts underlying managerial accounting. The course provides an understanding of: the cost concepts, the common methods for determining unit product costs, the cost-volume-profit relationships and the rationale for budgeting.

### **Bibliografia e materiale didattico**

During the course, teaching material and bibliographical references useful will be provided

### **Modalità d'esame**

written exam

*Ultimo aggiornamento 17/09/2023 15:43*