



Universitat de Lleida

DEGREE CURRICULUM **ST IN BIO-ECONOMY AND PRINCIPLES OF ENVIRONMENTAL SUSTAINABILITY**

Coordination: VILADRICH GRAU, MONTSERRAT

Academic year 2023-24

Subject's general information

Subject name	ST IN BIO-ECONOMY AND PRINCIPLES OF ENVIRONMENTAL SUSTAINABILITY			
Code	111014			
Semester	ANUAL CONTINUED EVALUATION			
Typology	Degree	Course	Character	Modality
	Master's Degree Erasmus Mundus in Spatial and Ecological Modelling in European Forestry	2	OPTIONAL	Attendance-based
	Master's Degree Erasmus Mundus in Spatial and Ecological Modelling in European Forestry		OPTIONAL	Attendance-based
Course number of credits (ECTS)	3			
Type of activity, credits, and groups	Activity type	PRACAMP		TEORIA
	Number of credits	1.2		1.8
	Number of groups	1		1
Coordination	VILADRICH GRAU, MONTSERRAT			
Department	ECONOMICS AND BUSINESS			
Important information on data processing	Consult this link for more information.			
Language	100% English			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
VILADRICH GRAU, MONTSERRAT	montse.viladrich@udl.cat	3	

Learning objectives

The goals of this course is to study the relationship between the economic system and natural resources.

To learn about the concept of sustainability from an economics perspective.

What does sustainable development means? What are its goals?

To learn the economic consequences of the existence of externalities and how to assign economic value to the forest ecosystemic services. Why is it important for the society at large a correct valuation of these services?

To learn about the relationship between economic and biologic sustainability.

To learn about concept of inclusive wealth

Competences

Increase the ability to think critically and gain understanding of how human actions influence the environment and in turn how environment change impacts on human well-being.

Be able to suggest instruments or policies for the society to set in a globally sustainable path,

Learn how to think critically about the intended and unintended consequences of alternative environmental policies.

Subject contents

It is a general subject of a wide range of contents and applications within the forestry world.

Some of the topics that we would adress are:

1. The relationships between economic system and natural resources. The trade-off between economic system and nature.
2. What does sustainable development means? What are the Sustainable Development Goals (SDG)?
3. Externalities and ecosystem services.
4. Biodiversity, ecosystem services and their economic valuation.
5. The trade-off between economics and biodiversity. Policy instruments to facilitate these relationships.
6. Resilience - Tipping points and uncertainty
- 7 Trade-offs in components of sustainability.

Methodology

It will be a face-to-face seminar where the students will have to read and present the assigned readings that will approach the main topics of the course. The readings will be discussed and commented in class with the professor. If it were not possible to do a face-to-face seminar it would be a virtual seminars (webinars),

Evaluation

Each student will write a term paper that will be evaluated. It is recommended that each student must present their thematic proposal for the paper of the subject. If you do not have a topic the teacher would suggest you one.

Bibliography

Selected References

- Admiraal, Jeroen; Wossink, Ada; de Groot, Wouter; de Snoo Geert R. (2013). More than total economic value: How to combine economic valuation of biodiversity with ecological resilience, *Ecological Economics* 89:115–122.
- Arrow, Kenneth; Dasgupta, Partha; Goulder, Lawrence; Daily, Gretchen; Ehrlich, Paul; Heal, Geoffrey; Levin, Simon; Mäler, Karl-Göran; Schneider, Stephen; Starrett, David and Brian Walker (2004). Are We Consuming Too Much?, *Journal of Economic Perspectives*, Volume 18(3): 147–172.
- Bartelmus, Peter (2013). *Sustainability Economics: An Introduction*. Routledge, Oxon, UK
- Dirzo, R. & Raven, Peter H. (2003). Global State of Biodiversity and Loss. *Annu. Rev. Environ. Resour.* 2003. 28:137–67.
- Kates, Robert W. (2010). Readings in Sustainability Science and Technology. Editor CID Working Paper No. 213
- Matsushita, Kyohei; Yamane, Fumihiro and, Kota Asanoc (2016). Linkage between crop diversity and agro-ecosystem resilience: Nonmonotonic agricultural response under alternate regimes. *Ecological Economics*, 126 23–31.
- Osés-Eraso, Nuria & Montserrat Viladrich-Grau (2007). On the sustainability of common property resources, *Journal of Environmental Economics and Management* Volumen: 53(3): 393- 410.