



Universitat Autònoma de Barcelona

UAB MODULE TEACHING GUIDE

	1st semester
40418	Foundations of ecological economics
40419	Socio-environmental research methods
40963	Transversal concepts and techniques I
	2nd semester
41868	Climate change
41869	Global change
40966	Transversal concepts and techniques II
	3rd semester
40967	Industrial Ecology I
40968	Industrial Ecology II
40969	Practicum
	4th semester
40970	Thesis

MODULE TEACHING GUIDES FOR FIRST SEMESTER

40418	Foundations of ecologicals economics
40419	Socioenvironmental research methods
40963	Transversal concepts and techniques I

Name	Transversal concepts and techniques I			
Code	40963			
Course and teaching period	First Semester			
Schedule				
Credits ECTS	10			
Type of Module	Common of Master Common of speciality			
Previous requirements to follow the module	-			
Teaching language	English			
Module responsible	Prof. Gara Villalba			
Department responsible	Dpt Chemical Engineering			
TEACHING TEAM				
Professor name	Department	Office	e-mail	Tutorials
Louis Lemkow	ICTA		louis.lemkow@uab.es	
Marco Armiero	ICTA	QC-3095	marco.armiero@tin.it	
Giuseppe Munda	Economia i Història Econòmica	B3-112	Giuseppe.Munda@uab.es	
Agustí Lobo	ICTA	QC-3105	agustin.lobo@ija.csic.es	

MODULE ESPECIFIC DATA

Educational objectives of the Module	<p>At the end of the module, the student will:</p> <ul style="list-style-type: none"> - Be able to apply multicriteria analysis to case studies - have basic knowledge of environmental history - have basic knowledge of Catalanian history - have knowledge about the most widely used remotely-sensed products (GIS), their processing levels and the means to access them.
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	Skill	Description
Specific skills of the module	<ol style="list-style-type: none"> 1. Integration of knowledge 2. Critical thinking 3. Oral communication 4. Analysis 	<ol style="list-style-type: none"> 1. Fundamentals of multicriteria analysis. 2. vision of the different themes in environmental science 3. Clear communication skills, learning from seminars and putting in practice in classes 4. Apply knowledge of science and modelling (GIS)
Module structure and contents	<ol style="list-style-type: none"> 1. Seminars. There will be about 10 seminars during the semester which are mandatory to attend. This is a series of seminars that run every Monday at 12:00h organised by ICTA. The contents covers all aspects of environmental studies, from sociology, to economics, technology and engineering. The seminars are advertised in ICTA's website and on the virtual campus . 2. Environmental History: an introduction to the discipline as a contribution to overcome the divide between social and natural sciences. 3. Social Multi-criteria evaluation: proposed as a tool to integrate different scientific languages in a public choice framework, where the whole "civil society" and ethical concerns on future generations have to be considered along with policy-makers and market conditions. 4. GIS. Introduction to geographic information systems. 5. Catalonian culture: the students will be introduced to Catalonian history, culture, and language. 	
Teaching methodology	<p>Teaching and discussions will occur during class times, guided by particular readings and handouts assigned by individual instructors. There will also be a field trip to Barcelona as part of the "Catalonia culture" section of this module.</p>	
Evaluation	<p>The evaluation of this module will be calculated the following way:</p> <ul style="list-style-type: none"> -20% seminars (grade based on multiple choice test that will be available on the virtual campus) -20% grade from Environmental History -20% grade from Social multi criteria evaluation -20% grade from GIS -20% grade from Catalonian culture <p>Each professor will have different ways of evaluating their sections, and will make this known to the students at the beginning of class.</p>	
Bibliographic and web links	<p>To be provided by individual instructors as the course proceeds.</p>	

Name	Socio-environmental Research methods: Political Ecology			
Code				
Course and teaching period	Fall			
Schedule	TBA			
Credits ECTS	10			
Type of Module	<input checked="" type="checkbox"/> Common of Master <input checked="" type="checkbox"/> Common of speciality <input type="checkbox"/> Optional			
Previous requirements to follow the module	None			
Teaching language	English			
Module responsible	Marco Armiero, Giorgos Kallis			
Department responsible	ICTA			
TEACHING TEAM				
Professor name	Department	Office	e-mail	Tutorials
Marco Armiero	ICTA		marco.armiero@gmail.com	
Giorgos Kallis	ICTA	QC/3090 EE	giorgoskallis@gmail.com	
Christos Zografos	ICTA		czografos@gmail.com	
Giacomo D'Alisa	ICTA		giacomo_dalisa@yahoo.it	
Isabelle Angulowski	ICTA		ianguelo@mit.edu	
Louis Lemkow	Sociology	C5/442	louis.lemkow@uab.cat	
Mario Giampietro	ICTA	QC/3097 EE	Mario.giampietro@uab.cat	



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MODULE ESPECIFIC DATA

<p>Educational objectives of the Module</p>	<p>At the end of the module, the student will be familiar with the key social theory concepts and methodological tools used by political ecologists and be able to “do” political ecology, i.e. design and execute a research project on a particular environmental conflict or problem.</p>	
<p>Specific skills of the module</p>	<p>Skill</p>	<p>Description</p>
	<p>Use social theory to analyse environmental problems</p>	<p>Familiarization with key bodies of social theories applied to environmental issues (Marx, Foucault, Polanyi).</p>
	<p>Design case-study research and use qualitative research tools</p>	<p>Reading and learning from articles that combine narrative form with qualitative research.</p>
<p>Understand the role of power in shaping environmental change</p>	<p>Reading and understanding the later contributions on the field of political ecology</p>	

Module structure and contents

- 1. Introduction to Political Ecology. What is political ecology and what does it study and how?**
- 2. Ecological Distribution Conflicts. Introduction to the “environmentalism of the poor” thesis and the study of conflict at the commodity frontiers. What is “social metabolism” and how does it relate to conflict?**
- 3. Environmental Justice. What do we mean by environmental justice and which are the historical origins of the concept? Justice in what and for whom?**
- 4. The Social construction of scarcity. What do we mean that a resource is not only material but also socially constructed? What is the role of discourses and ideas in shaping access to environmental resources?**
- 5. Accumulation by dispossession. Introduction to the Marxian approach to the analysis of socio-environmental change and the role of power and surplus value extraction. Primitive accumulation as a continuous strategy in the expansion of global capital. Privatization, neo-liberalism and capital accumulation.**
- 6. Governmentality. Introduction to the Foucauldian approach to the analysis of socio-environmental change and to knowledge as a form of power. Post-structuralist political ecology.**
- 7. On the definition of the political. What do we mean by “political” ecology? What is political and what a-political? Why and how may environmental problems may lead to a depoliticization of public debates? Introduction to a Gramscian perspective on the understanding of power and environmental change.**
- 8. Power and 1st World Peripheries I. The distinction between structuralist and post-structuralist accounts of power and socio-environmental change. Definitions of power.**
- 9. Power and 1st World Peripheries II. Locating the political in political ecology. Power and core-periphery relations.**
- 10. Post-normal science. Differences between normal and post-normal science. Science as a form of power. How to use science in complex, conflictive contexts?**
- 11. Enclosures. The great transformation and the work of Karl Polanyi. Wilderness conservation as a form of enclosure and power control. The continuing relevance of enclosures. Tragedy of the commons or the tragedy of enclosures?**
- 12. Neoliberalism. Disaster capitalism and the use of natural disasters for the promotion of neo-liberal reforms.**

<p><u>Teaching methodology</u></p>	<p>Classes will follow a seminar format with a combination of teaching by the instructor and discussion in class of assigned readings. For each class we will read and discuss two articles. Typically one of them will be more theoretical, presenting the main concept to be discussed in this class, and the second will include a case-study, applying the concept in an environmental problem or conflict.</p> <p><u>All students are expected to have read these articles in advance and write short commentaries (see assignments below). A group of 2 students will be responsible for synthesizing the commentaries of the week at the beginning of the class (5 minutes presentation). After this, a critical discussion of the key ideas of the articles will take place under the facilitation of the instructor. This might also include discussion in small groups, games, use of audiovisual material (movies, lectures by famous political ecologists, videos, etc).</u></p>
<p><u>Evaluation</u></p>	<p>1. Weekly commentaries For each class you should write a commentary on the readings of the week, responding to a set of questions that will be handed to you the week before. The commentary should be about 500 words long. Commentaries should be emailed <u>not later than Sunday night</u> before class to the student(s) responsible for presenting the commentaries. They will then have to edit all commentaries into a single document and send it back to class not later than Monday at 12 p.m.</p> <p>2. Group project Groups of 2-3 students should work to present an analysis of an environmental conflict in the last class (25/1). The presentation should last 10 minutes; all members of the group should be involved in the presentation. The presentation should focus on an environmental conflict of interest and present basic data about the conflict (geography, history, social and environmental impacts involved, etc), the main actors involved in the conflict, their interests, values and “languages” (narratives about the conflict) and explain the institutional and social arenas through which the conflict is mediated. A good project should use one of the main concepts of political ecology presented in the course to explain the conflict and challenge “mainstream” views about it.</p> <p>3. Final exam The final course assignment is a take-home exam consisting of three essays on selected topics related to the content of the course. The exam questions will be distributed in the class of 18th of January and students should email their responses by the 30th of January.</p> <p>The final grade will be derived 70% from the exam and 30% from the group project. The weekly commentary will not be graded, but 1 point will be subtracted from the final grade for each commentary not delivered in time (i.e. if you do not deliver two commentaries during the course, the maximum grade you can get will be 8, and not 10). Exemptions apply for exceptional circumstances (e.g. serious illness) and with prior information and consent of the instructor.</p>
<p><u>Bibliographic and web links</u></p>	<p>To be provided by individual instructors as the course proceeds.</p>



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Name	FOUNDATIONS OF ECOLOGICAL ECONOMICS			
Code	40418			
Course and teaching period	First Semester			
Schedule				
Credits ECTS	10			
Type of Module	Common of Master <input checked="" type="checkbox"/> Common of speciality <input type="checkbox"/> Optional			
Previous requirements to follow the module	-			
Teaching language	English			
Module responsible	Giuseppe Munda			
Department responsible	Dpt Economia I Història Econòmica			
TEACHING TEAM				
Professor name	Department	Office	e-mail	Tutorials
Giuseppe Munda	Econ.Hist.Econ.	B3-112	giuseppe.munda@uab.es	
Jeroen van den Bergh	ICTA		jeroen.bergh@uab.cat	
Jesús Ramos-Martín,	Econ.Hist.Econ.	B3-112	Jesus.Ramos@uab.cat	
Kozo Mayumi	Visiting professor		mayumi@ias.tokushima-u.ac.jp	



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MODULE ESPECIFIC DATA

<p>Educational objectives of the Module</p>	<p>The course will introduce the field of ecological economics, giving attention to theoretical, empirical and methodological issues. In particular, the course will include an overview of traditional topics of environmental economics and more recent developments within ecological economics.</p> <p>At the end of the course the student is expected to have a good understanding of:</p> <ul style="list-style-type: none"> i) The main themes, theories and methods addressed by ecological economics; ii) The basic literature regarding ecological economics; iii) The essential differences between the way environmental problems and solutions are approached in standard economics and Ecological Economics; iv) New methods that have been proposed by, and are applied within, ecological economics; 	
<p>Specific skills of the module</p>	<p>Skill</p>	<p>Description</p>
	<p>Students will be able to read research articles in ecological economics, and to prepare a research proposal for a master thesis in this field.</p>	
<p>Module structure and contents</p>	<p>The history of Ecological Economics. Indicators and indices of Sustainability. Environmental macroeconomic accounting. Economics of Resources. Externalities and environmental policy. Cost-benefit analysis compared to Multi-criteria evaluation. Technical change and consumption. Analysis of specific issues (climate change, biodiversity).</p>	
<p><u>Teaching methodology</u></p>	<p>Readings for each session will be assigned beforehand. Teaching time will be divided between explanation and question time. Students may be asked to prepare written essays too.</p>	
<p><u>Evaluation</u></p>	<p>Essays and final exam.</p>	
<p>Bibliographic and web links</p>	<p>Each lecturer will provide key readings for each of the sessions, through the Virtual Campus platform.</p>	