Introduction course

<table>
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<th>Course title</th>
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<tbody>
<tr>
<td>Level / Semester</td>
<td>Master 2 Economics &amp; Ecology / Semester 1</td>
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<tr>
<td>Credits</td>
<td>4.0 ECTS</td>
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<tr>
<td>Teaching Hours</td>
<td>30 hours</td>
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Economy students (registered at UT1) follow:

- Ecology and the Environment for Economists (15hrs)
- Introduction module part 2 (15hrs)

Ecology students (registered at UPS) follow:

- Introduction to Economics for Biologists (15hrs)
- Introduction module part 2 (15hrs)

Ecology and the Environment for Economists

<table>
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<tr>
<th>Instructors</th>
<th>Jorge Peña</th>
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<td>Teaching Hours</td>
<td>15 hours</td>
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Course description

Ecology is the scientific study of the interactions that determine the distribution and abundance of organisms. This course is an intensive introduction to some of the main theoretical concepts in ecology for students coming from an economics background. It will mainly focus on biotic interactions at the level of populations and communities, and will cover the following topics:

1. Introduction to ecology and evolution as scientific fields.
2. Intraspecific competition, density dependence, and population dynamics.
3. Interspecific competition.
5. Mutualisms.

The concepts will be introduced by means of mathematical models and their importance illustrated by case studies. The main goal is for economists to be sufficiently acquainted with some of the main concepts (and jargon) used in ecology to be able to interact with biologists in an efficient way, and to follow more advanced courses of the Master program.

Course material

The primary texts for this course are the following textbooks on general ecology:

Introduction to Economics for biologists

<table>
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<tr>
<th>Instructors</th>
<th>François Salanié</th>
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**Teaching staff contacts – Coordonnées de l’équipe pédagogique:**

François Salanié (office MS216, building S) is available by appointment (francois.salanie@tse-fr.eu).

**Course’s Objectives – Objectifs du cours:**

We have 15 hours to introduce biologists to the world of economic concepts, tools, and reasonings. In more details: Get a taste of economic approaches: individualism, decision-making, revealed preferences, incentives, equilibrium, optimum... Know the main definitions and results: utility, marginal rates or costs, surplus, markets, goods, welfare theorems, Pareto optima, externalities, ... Understand the methods of Public Economics: they allow to design and evaluate the effects of public policies.

**Practical information about the sessions – Modalités pratiques de gestion du cours:**

Be on time, participate, read a lot.

**Grading system – Modalités d’évaluation:**

Grading is purely based on participation.

**Bibliography/references – Bibliographie/références:**


**Session planning – Planification des séances:**

There will be five sessions of three hours. Session 1: generalities, economics and the world. Sessions 2 to 4: Micro-Economics. Session 5: Public Economics and the Environment.
A novel, interdisciplinary M2
Economics & Ecology
UT1 & UPS

Introduction course part 2

<table>
<thead>
<tr>
<th>Instructors</th>
<th>Claire de Mazancourt (coordinator) and others</th>
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<tr>
<td>Teaching Hours</td>
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For this second part of the course, all students will be together.

The aim of this part of the module is to embrace the interface between economics and ecology. It will use a mixture of lectures, group projects and individual projects.

Presentations from outside speakers, finishing students and researchers at the interface:
End of Formation Day and other lectures.

Problem-based learning will be used to tackle a real question at the interface between economics and ecology as a group (2 full days in Moulis); students will present their work in an oral presentation in Toulouse.

Personal project: students will produce a 5 pages’ personal project at the economics/ecology interface on a subject of their choice

REQUIREMENTS AND GRADING POLICY

Due to the interdisciplinary nature of this master, attendance at lectures will be required. The course grade will be determined by the performance of the student on assignments (individual or team-based assignments, and/or presentations), and/or a final exam. Due again to the pluri-disciplinary nature of this master, assignments and exams may be different for economics and for ecology students.

Grading policy for this module: The module will use a combination of several evaluation methods, including a written examination and oral presentations or written essays.