1. **Title of the module**

ECON6310 (EC631) Applied Environmental Economics

1. **Division which will be responsible for management of the module**

Division of Human and Social Sciences

1. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 5

1. **The number of credits and the ECTS value which the module represents**

15 credits (7.5 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Autumn or Spring

1. **Prerequisite and co-requisite modules**

Prerequisites:

ECON3040 Principles of Economics,

ECON3050/ECON3060 Mathematics for Economics,

ECON3090 Statistics for Economics are pre-requisite modules

Co-requisite:

[ECON5800](https://www.kent.ac.uk/socsci/documents/module-specs/2018-19/economics/undergraduate/econ5800.docx) (EC580) Introduction to Econometrics

1. **The courses of study to which the module contributes**

This is an elective module for all Single Honours Economics Courses and Joint Honours Courses in Economics.

The module is **NOT** available to students across other degree courses in the University

1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to:**
	1. Apply concepts and theories from environmental economics to the formulation and evaluation of environmental issues.
	2. Demonstrate the knowledge and analytical skills to critically evaluate environmental issues and policy questions.
	3. Utilise spreadsheets, in particular, Microsoft EXCEL to link theory and application to real world problems.
	4. Undertake graphical, numerical, simulation and statistical data analyses to further understanding of key theoretical principles.
	5. Practically address key policy issues within environmental economics.
2. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**
	1. Retrieve information from a variety of sources
	2. Analyse data to support their understanding of economic issues
	3. Communicate economic arguments orally and in writing
	4. Plan work and study independently
	5. Reflect on their academic learning
3. **A synopsis of the curriculum**

This module applies various aspects of environmental economic theory in combination with mathematical and statistical methods to provide students with an understanding of the link between economic theory and policy application. It introduces students to fundamental key skills used by environmental economists in the application of economics to real world environmental issues.

The main focus will be on how economic theory is applied to real world environmental issues and how this can be demonstrated using EXCEL. Therefore, it continues the development of students’ use of information technology within a structured environment. This module will provide students with an enhanced understanding of how economic theory can be translated into practical policy advice.

The module introduces students to a variety of environmental economic practical issues. Alongside formal lectures, computer workshops and seminars are designed to develop academic research skills and the ability to communicate ideas both verbally and in writing.

* Examples of topics the module may cover include:Pollution control instruments – will consider taxes and permits using market simulation and potentially the development of equilibrium displacement models;
* Non-market evaluation – will consider stated and revealed preference approaches to non-market valuation, consider experimental design, survey design and delivery and data analysis using linear regression and binary choice models;
* Renewable resource management – will consider fisheries and/or forestry management as a dynamic programming problem using the EXCEL solver; and
* Non-renewable resource management – will consider oil reserve management as a dynamic programming problem using the EXCEL solver.
1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**
* Hanley N, Shogren JF and White B (2013) Introduction to Environmental Economics, Oxford University Press
* Perman, Ma, Common, Maddison and McGilvray (2011) Natural Resource and Environmental Economics, 4th Edition, Pearson.
* Conrad, J. M. (2010) Resource Economics, Second Edition, Cambridge University Press, New York

Additional reading and resources will be brought to the attention of the class when appropriate. For example, this may include the unpublished paper, "Exploring Easter Island Economics with Excel," by Thomas R. Dalton, R. Morris Coats and R. Andrew Luccasen (2011), presented at the 2011 Annual Conference of the Southern Economic Association.

1. **Learning and teaching methods**

Total contact hours: 28

Private study hours: 122

Total study hours: 150

1. **Assessment methods**
	1. Main assessment methods

Four differentiated EXCEL based project reports (1000 words) (Each worth 25%)

13.2 Reassessment methods

 Like for Like

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 9.1 | 9.2 | 9.3 | 9.4 | 9.5 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |
| Lecture | **x** | **x** | **x** | **x** | **x** | **x** |  | **x** | **x** |  |
| Seminar  | **x** | **x** |  | **x** |  | **x** | **x** | **x** |  | **x** |
| Computer Workshop | **x** |  | **x** | **x** | **x** | **x** | **x** | **x** |  | **x** |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |
| Reports Topic 1 to 4 | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |

1. **Inclusive module design**

The School recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or centre(s) where module will be delivered**

Canterbury

1. **Internationalisation**

The subject content of the module focuses primarily on UK policy design but the underlying issues considered apply in an international context and relevant comparisons will be drawn upon across each topic area (see module synopsis).

**DIVISONAL USE ONLY**

**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 21.07.21 | Minor | Sept 21 | 13.2 | No |