Environmental Economics and Sustainable Development	
Module Ref No:	**P110-3Z/003**
Date of Validation:	**2020**
SCQF Level:	**10**
SCQF Credits:	**15**

1. Rationale

Economic systems depend on resources and services provided by the environment and thus a healthy and sustainable economy is ultimately dependant on a healthy and well-managed environment. Environmental economics is the application of the principles of economics to the study of how environmental and natural resources are developed and managed. This module will develop and use tools of economic analysis to discuss key environmental economics issues. Emphasis will be placed on the development of appropriate analytical tools for non-market goods valuation. The role of governments in managing and regulating natural resource use and sustainability will be examined in national and international context, expanding on material covered in other parts of the course.

2. Learning Outcomes

At the conclusion of this module the student should be able to:

LO1:	Appraise economic approaches to delivery of sustainable development, in particular considering the role of indicators of growth, cost benefit analysis., market instruments, command and control measures and tradable pollution permits in delivery of sustainable development
LO2:	Appraise the theory and practice of the valuation of ecosystems and Natural Capital and the role of valuation in the management and protection of the environment.
LO3:	Evaluate the economic theory of regulation and government intervention and appraise the role of policy instruments at all levels of government

3. Content

3.1	**Principles and development of environmental economics** The rationale and historical development of Environmental and Ecological Economics. The limitations of neo-classical economics and the traditional GNP orientated approach to growth. Inter and intra generational delivery of sustainable development and SD indicators
3.2	**Environmental valuation** Rationale and theory of environmental valuation, methods of valuation, the debate over Natural Capital valuation and its implications for policy
3.3	**Government policy and sustainable development** The role of governments locally, regionally nationally and globally. Reasons for intervention. Role and limitations of target setting. Nature of policy instruments and the debate over their use.
3.4	**Contribution of EMS** Ecosystems services approach and policy measures delivering weak and strong definitions of sustainable development.

4. Approaches to Learning and Teaching

Notional Study Hours:

Typically, students will have to undertake about 150 hrs of study to successfully achieve the learning outcomes for this module; this will be made up of a combination of both scheduled and independent study as indicated below.

Scheduled Study:	**150 hrs**

Typically consisting of:	
Lectures	30 hrs
Seminars	5 hrs
Tutorials	3 hrs
External Visits	7 hrs
Independent Study:	**120 hrs**

5. Graduate Attributes

Opportunity to develop the following aspects of graduate attributes will be included within this module:

Graduate Attribute	**Learning Activity and Aspect Developed**
1. Academically competent	This module will build on a basic knowledge of economics to allow an in-depth understanding of economic systems and natural capital valuation, linked to sustainable development.
2. Critical thinker	In depth appreciation of skills in key economic and sustainability areas, will support students to enhance awareness and present logical arguments for use of different methods of valuation.
3. Desire for learning and personal development	Openness to, and an interest in, lifelong learning through both directed and independent study Awareness of personal strengths and weaknesses
4. Responsible member of society	Through an understating of the value of natural systems, students may learn how to value and manage resources sustainably.
5. Employability	Ability to work independently and as part of a team Diverse set of transferable skills

6. Assessment

This module will be assessed using the following methods:

Assessment Method	**Contribution to Grade (%)**	**Nature of Assessment**
Economic and Sustainable Development Action Plan	30%	The student will design an action plan for a sector or country of their choice and find a creative way to communicate persuasively with stakeholders. This can be done using Team-based learning (TBL) methodology or on an individual level.
Written assignment or essay	50%	Possible approaches: i) A case study related to government policy on the environment (2,500 words) **or** ii) An essay related to government policy on the environment (2,500 words)
Reflective analysis, participation, engagement	20%	Reflective analysis on concepts and themes covered in classroom along with participation and engagement

7. Reading

Recommended: (additional new reading will be identified as appropriate)

Raworth, K. (2022) *Doughnut economics: Seven ways to think like a 21st-century economist*. UK: Penguin Books.

Meadows, D.H. and Wright, D. (2015) *Thinking in systems: A Primer*. White River Junction, VT: Chelsea Green Publishing.

Daly H. (2014). From Uneconomic Growth to a Steady-State Economy.Elgar Publishing.

Sachs J. (2015). The Age of Sustainable Development. New York: Columbia University Press

Perman R et al. (2011) Natural Resource and Environmental Economics.

Freeman, M. et al (2014). The measurement of Environmental and Resource Values Theory and Values, Third Edition, New York: Routledge.

Daly H. and Farley J.C., (2011). Ecological Economics: Principles and Applications; second edition (Ch 13 & 14) University of Chicago, Press Books

Additional:

Rietbergen-McCracken, J. and Abaza, H. (2000). Environmental Valuation Earthscan, London.

8. Staff

Module Leader:	David Nasseri (Edinburgh)
Other contributing staff:	John MacDonald (Aberdeen)