DEREE COLLEGE SYLLABUS FOR: EC 3134 ENVIRONMENTAL AND RESOURCE ECONOMICS 3/0/3	
Students cannot take both EC3134 Environmental Economics /ES3139 The Economy and the Environment.	
(Updated: Spring 2025) **UK LEVEL: 5** **UK CREDITS: 15**	
PREREQUISITES:	EC 1000 Principles of Microeconomics
CATALOG DESCRIPTION:	Market activity and the environment. Pollution as an externality. Environmental regulatory approaches: theory and practice. Benefit estimation procedures. Resource management.
RATIONALE:	This course introduces the student to the consequences of the interaction of market activity to the environment. It enables the student to understand how environmental problems are the outcome of market failure and, consequently, the role of governments in addressing such problems. It introduces the student to theory and practice of alternative environmental regulatory policies and natural resource management policies at the national and international levels. It complements economic theory courses by illustrating how abstract economic models are actually used at the national and international levels to address issues related to environmental problems.
LEARNING OUTCOMES:	*As a result of taking this course, the student should be able to:* 1. Demonstrate knowledge of the alternative ways of modeling the interaction of the economy and the environment. 2. Analyze how and why environmental problems can be modeled as cases of market failure/externalities. 3. Evaluate the advantages and disadvantages of various environmental policies. 4. Critically discuss the characteristics and properties of measures of benefits and benefit estimation procedures and their applicability to specific situations. 5. Define the basic conditions of the optimal use of renewable and exhaustible resources. 6. Evaluate cost-benefit analysis procedures intended to address issues related to preservation and conservation.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: • Lectures and class discussions. • Homework assignments. • Office hours held by the instructor to provide further assistance to students. • Use of library facilities for further study and preparation for the exams

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- Use of the Blackboard course management platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, formative quizzes and online submission of assignments.

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<tr><td>ASSESSMENT:</td><td>

Summative:

1st assessment: Project (1800 – 2000 words)	40%
Final assessment: In class written examination (Two-hour, closed book, comprehensive)	60%

Formative:

Problems/essay question practice sets	**0**

The formative assessment aims to prepare students for the summative assessments.

The project tests Learning Outcomes 1 – 3 with emphasis on applications. The final examinations tests Learning Outcomes 1 – 6 with a focus on topics 4 - 6.

The final grade for this module will be determined by averaging all summative assessment grades, based on the predetermined weights for each assessment. If students pass the comprehensive assessment that tests all Learning Outcomes for this module and the average grade for the module is 40 or higher, students are not required to resit any failed assessments.

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<tr><td>INDICATIVE READING:</td><td>

REQUIRED READING:
Tietenberg, T., and Lewis, L. 2018. Environmental and Natural Resource Economics. Routledge, 11th edition. ISBN 9781351803366

RECOMMENDED READING:
Harris, J.M, and Roach, B. Environmental and Natural Resource Economics: A Contemporary Approach, latest edition.
Anderson, D. A. Environmental Economics and Natural Resource Management, latest edition.
Field, B. and Field, M. 2008. *Environmental Economics.* McGraw Hill.
Pearce, D. W. and Turner, R. K. 1990. *Economics of Natural Resources and the Environment.* London: Harvester Wheatsheaf.
Other sources, including journal and newspapers' articles, research papers etc. recommended by the instructor throughout the semester.

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<tr><td>INDICATIVE MATERIAL:
(e.g. audiovisual, digital material, etc.)</td><td>

REQUIRED MATERIAL: N/A

RECOMMENDED MATERIAL: N/A

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<tr><td>COMMUNICATION REQUIREMENTS:</td><td>Use of appropriate academic conventions as applicable in oral and written communication.</td></tr>
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	Faculty and instructors are under no obligation to respond to emails and other requests during weekends and holidays. Emails will be replied to within two working days. If an instructor is on leave, an auto-response message will be sent, letting students know when the instructor will be back and resume regular communication duties.
SOFTWARE REQUIREMENTS:	MS Office and Blackboard CMS Word and Excel
WWW RESOURCES:	HYPERLINK "http://www.env-econ.net"www.env-econ.net www.epa.gov www.teebweb.org www.nature.com www.ethree.com
INDICATIVE CONTENT:	1. Economy and the Environment 1.1. Introduction 1.2. Circular flow model 1.3. Materials balance model 1.4. Sustainable economy 2. Environmental Problems as Externalities 2.1. Pollution as an externality 2.2. Pollution as a market failure 2.3. Property rights 3. Environmental Policies 3.1. Introduction 3.2. Pollution charges 3.3. Standards 3.4. Subsidies 3.5. Permit trading systems 3.6. Clean technologies 4. Measures of Benefits 4.1. Introduction 4.2. Consumer surplus, compensating variation, equivalent variation 4.3. Willingness to pay, willingness to accept 4.4. Total economic value 5. Benefit Estimation Procedures 5.1. Hedonic-price approach 5.2. Contingent valuation methods 5.3. Dose-response methods 5.4. Travel - cost approaches 6. Resource Management 6.1. Discounting the future 6.2. Renewable resources 6.3. Exhaustible resources 7. Preservation and Conservation 7.1. Development and total economic value 7.2. Irreversibility 7.3. Safe minimum standards