



**School of Economics**  
**Academic Year 2024-25 Term 2**  
**MSc in Economics**

### **ECON6012 Environmental Economics, Business and Policy**

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School of Economics, Level 5, Room 5043

#### **COURSE DESCRIPTION**

This course aims to help students understand the issues on environmental policies and business, policy, through lectures and a real-world project and equip them with rigorous economics methods to analyze both domestic and international environmental issues as well as resource management issues. This course emphasizes the importance of market-based approach to environmental regulations and covers growing body of empirical evidence from the field. Topics covered include welfare economic foundations, environmental policy instruments, environmental valuation, environment and development, non-renewable and renewable resource management, green finance, environmental accounting, and environmental business.

#### **LEARNING OBJECTIVES**

The students in this course should be able to understand basic theories, concepts and principles, and empirical findings from environmental economics and related fields, and apply the insights from them to the analysis of business and policy issues through the project.

#### **PRE-REQUISITE/CO-REQUISITE/MUTUALLY EXCLUSIVE COURSES: None**

Students should be familiar with basic algebra, elementary calculus, probability theory and optimization theory. Also, basic knowledge of microeconomics is assumed. While I will briefly review relevant mathematical and economic concepts in the lecture, **it is strongly recommended that students attempt this course after the first microeconomics course.** Prior exposure to public economics is helpful but not required.

**GRADED BASIS:** Graded

**COURSE UNIT:** 1CU

**COURSE AREA:** Elective

#### **ASSESSMENT METHODS**

Class Participation	: 10%
Quizzes	: 30% (5% x best 6 out of 7)
Student Project	: 30%
Final Examination	: 30%
<b>Total</b>	<b>: 100%</b>

#### **CLASS TIMINGS**

TBA

The course comprises ten 3-hour sessions, followed by an examination. Most class sessions will involve a lecture and in-class quizzes. Lecture notes are posted on eLearn prior to the class. Students are expected to actively participation in the class.

**RECOMMENDED/REQUIRED TEXTS AND READINGS**

[PMMC] Perman, R., Ma, Y., McGilvray, J., Maddison, D., and Common, M. (2011) *Natural Resource and Environmental Economics*. 4<sup>th</sup> Edition. Pearson.

I will not follow this book closely and you are not required to purchase this book, but some of the exercises may be taken from this book. Students are not required to purchase the book.

**WEEKLY LESSON PLAN (TBC; subject to modification)**

Week No	Topic	PMMC Chap
1	Lecture 1: Probability, introduction to environmental economics, sustainable development, development and the environment	1-3
2	GIC Guest Speakers Presentation	-
3	Lecture 2: Geometric sequences, calculus, cost-benefit analysis, Quiz #1	11
4	Lecture 3: Environmental valuation, risk and uncertainty, Quiz #2	12-13
5	Lecture 4: Climate change, environmental accounting, business, and finance, policy issues in Singapore, Supply-demand diagram, Quiz #3	9,19
6	Lecture 5: Constrained optimization, non-renewable resource management, Quiz #4	14-15
7	Lecture 6: Renewable resource management, typology of goods, Quiz #5	17
8	Recess	-
9	Lecture 7: Environmental Policy (I): Welfare economic foundations, partial equilibrium analysis, command-and-control approach vs. economic approaches, Quiz #6	4-7
10	Lecture 8: Environmental Policy (II): Imperfect information, Quasi-option value and biodiversity, trade and the environment, Theory of the second best, Quiz #7	10, 13, 17
	Exam	

**ACADEMIC INTEGRITY**

All acts of academic dishonesty (including, but not limited to, plagiarism, cheating, fabrication, facilitation of acts of academic dishonesty by others, unauthorized possession of exam questions, or tampering with the academic work of other students) are serious offences.

All work (whether oral or written) submitted for purposes of assessment must be the student's own work. Penalties for violation of the policy range from zero marks for the component assessment to expulsion, depending on the nature of the offense.

When in doubt, students should consult the instructors of the course. Details on the SMU Code of Academic Integrity may be accessed at <https://smu.sharepoint.com/sites/oasis/SitePages/DOSWKLWC/UCSC.aspx>.

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### **ACCESSIBILITY**

SMU strives to make learning experiences accessible for all. If students anticipate or experience physical or academic barriers due to disability, please let the instructor know immediately. Students are also welcome to contact the university's disability services team if they have questions or concerns about academic provisions: [DSS@smu.edu.sg](mailto:DSS@smu.edu.sg). Please be aware that the accessible tables in the seminar room should remain available for students who require them.

### **DIGITAL READINESS FOR TEACHING AND LEARNING (DRTL)**

As part of emergency preparedness, instructors may conduct lessons online via the Zoom platform during the term, to prepare students for online learning. During an actual emergency, students will be notified to access the Zoom platform for their online lessons. The class schedule will mirror the current face-to-face class timetable unless otherwise stated.

### **ASSESSMENTS**

Faculty have been instructed not to reuse questions verbatim from past year papers or published test banks, for the graded continuous assessments and examinations in this course.