

Course Outline

EE375 Applied Economics for Natural Resources and Environment

Semester 1/2021 (August 9 – November 27, 2021)

Number of Credit: 3

Prerequisite: EE210 or EE211 or EE213 (credits will not be awarded to students who are taking or have completed any 400-level courses in this subfield.)

Course Description: The relationship between economic growth, natural resources allocation and environmental problems. Basic economic theories used for analysis and application in natural resources management and environmental problems. The roles of government, community, and business sectors to control and solve problems in natural resource and environmental exploitation at local, national, and global levels. Concept of sustainable development. Concept of environmental justice. Basic concepts and methodologies in economic valuation of natural resources and environment.

Class Time and Logistic

Class day: Wednesday and Friday

Class time: 14:00 – 15:30

Teaching Materials Platform: [BE Moodle](#) (Enrollment key for BE Moodle: 4569 (<http://bemoodle.econ.tu.ac.th/>) and [Google Classroom Drive](#)

Class Lecture Platform: Zoom Meeting at <https://zoom.us/j/99803340562>

Instructor:

Name: Dr. Supawan Saelim

Office Hours: Wednesday and Friday at 15:30- 17:00

Email: supawans@econ.tu.ac.th

Course Objectives:

The course aims to provide fundamental knowledge on what topics are discussed in the fields of natural resources and environment, how economic concepts are applied to analyze issues in these fields, and how to approach a range of natural resource management and environmental problems using economic instruments to inform private and public sector with policy considerations.

Course Schedule and Topics:

Date	Topics	Notes
Aug 11 Aug 13	1. Introduction to natural resource and environmental economics a. Relationship between economics, natural resources, and environment b. Key insights from Economics	HSW (Ch.1)
Aug 18 Aug 20	2. Economic Approach a. Economic efficiency b. Efficient market allocations c. Externalities and market failure	HSW (Ch.2) TL (Ch.2)
Aug 25 Aug 27 Sep 1 Sep 3	3. Valuing the environment: Concepts and methods a. What 'economic value' means b. Cost-benefit analysis c. Types of valuation methods	HSW (Ch.3, 4) TL (Ch. 3,4)
Sep 8 Sep 10	4. Applications: Energy a. Problems and their sources b. Economic and policy instruments	TL (Ch. 7)
Sep 15	5. Applications: Water a. Problems and their sources b. Economic and policy instruments	TL (Ch.9)
Sep 17	6. Applications: Land a. Problems and their sources b. Economic and policy instruments	TL (Ch. 10)
Sep 22	7. Applications: Forest a. Problems and their sources b. Economic and policy instruments	TL (Ch. 11) HSW (Ch.10)
Sep 24	8. Applications: Fishery a. Problems and their sources b. Economic and policy instruments	TL (Ch.12)
Mid-term exam on Friday Oct 1 at 12:00 – 14:00		
Oct 6 Oct 8	9. Economics of Climate Change	TL (Ch.16) HSW (Ch.9)
Oct 15	10. Economics of Pollution Controls	TL (Ch.14)
Oct 20 Oct 22	11. Applications: Air pollution a. Problems and their sources	TL (Ch. 15, 17)

Date	Topics	Notes
	b. Economic and policy instruments	
Oct 27 Oct 29	12. Applications: Water pollution a. Problems and their sources b. Economic and policy instruments	TL (Ch. 18) HSW (Ch.11)
Nov 3 Nov 5	13. Applications: Waste and toxic substances a. Problems and their sources b. Economic and policy instruments c. Environmental Justice	TL (Ch.19)
Nov 10	14. Sustainable Development	TL (Ch.20)
Nov 12, 17 19, 24	Group project presentations	
Nov 26	Summary and review	
Final Exam on Wednesday Dec 1 at 9:00 – 11:30		

Main Reading Lists:

[TL] – Tietenberg, T. and Lewis, L. Environmental Natural Resource Economics, 2015 (10th edition), Pearson.

[HSW] – Hanley, N., Shogren, J. and White, B., Introduction to Environmental Economics 2013 (2nd edition), Oxford University Press.

Additional materials related to the topics will be provided during the class.

Grading Criteria:

Midterm Examination	30%
Final Examination	30%
Group project	20%
Assignment and quiz	20%

Group project: Students will work in groups of 4-5. Each group will identify problems of interests related to natural resources and environment, approach the problems using economic concepts and tools and propose policy considerations. The evaluation will be based on the quality of two deliverables i) A 20-minute group presentation ii) A 5-page policy brief.

Expected Learning Outcomes:

To understand natural resource and environmental problems with the perspective of an economist and be able to apply economic concepts and tools to analyze and solve the problems in the fields.

ACADEMIC CALENDAR & HOLIDAY SEMESTER 1/2021

Semester 1/2021 (August 9 - November 27, 2021)	
Classes Begin	August 9, 2021
Add-drop period	August 6 - 15, 2021
Tuition Fee Installment Plan For ID.61-63 only <i>(9 AM - 10.30 PM)</i>	#Round 1 (July 16 – 18, 2021) #Round 2 (August 30 – September 3, 2021) #Round 3 (September 20 – 22, 2021)
<i>H.M. Queen Sirikit The Queen Mother's Birthday*</i>	<i>August 12, 2021</i>
<i>Prince Mahidol Day*</i>	<i>September 24, 2021</i>
Mid-term Examination Period	September 27 - October 3, 2021
Withdrawal period with "W" on record	October 11 - November 15, 2021
<i>H.M. King Bhumibol Adulyadej The Great Memorial Day*</i>	<i>October 13, 2021</i>
<i>Substitution for King Chulalongkorn's Day*</i>	<i>October 22, 2021</i>
<i>King Chulalongkorn's Day*</i>	<i>October 23, 2021</i>
Last day of class for Semester 1/2021	November 27, 2021
Final exam period	November 29-30, December 1-3, 7-9, 11-17, 2021
<i>H.M. King Bhumibol Adulyadej The Great's Birthday*</i>	<i>December 5, 2021</i>
<i>Substitution for H.M. King Bhumibol Adulyadej The Great's Birthday*</i>	<i>December 6, 2021</i>
<i>Constitution Day*</i>	<i>December 10, 2021</i>

Remark * Holiday, No classes during this period