



Course Outline

EE375 Applied Economics for Natural Resources and Environment

Semester 1/2023 (August 15 - December 4, 2023)

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

Lecture time: Monday, 09.00-12.00 hours

Venue: Room 304, Faculty of Economics

Teaching Materials Platform: [Google Classroom](#) and [MS Team](#)

Instructor:

Name: Dr. Supawan Saelim

Office Hours: Monday at 13:30- 15:30 by appointment
at Room 452, 4th Floor, Faculty of Economics

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
Aug 21	1. Introduction to natural resource and environmental economics 2. Economic Approach (a. Economic efficiency b. Efficient market allocations c. Externalities and market failure)
Aug 28, Sep 4 (Hybrid with lecture videos)	3. Valuing the environment: Concepts and methods a. What 'economic value' means b. Cost-benefit analysis c. Types of valuation methods
Sep 11	4. Applications: Water 5. Applications: Fishery
Sep 18	6. Applications: Land 7. Applications: Forest
Sep 25	8. Applications: Energy
Midterm exam on Monday Oct 2, 2023	
Oct 9	9. Economics of Climate Change
Oct 16	10. Economics of Pollution Controls
Oct 23	11. Applications: Air pollution
Oct 30	12. Applications: Water pollution
Nov 6	13. Applications: Waste and toxic substances
Nov 13	14. Sustainable Development
Nov 20 Nov 27	Group project presentations
Dec 4	Summary and review
Final exam on Tuesday Dec 12, 2023	

Main Reading Lists:

[TL] – Tietenberg, T. and Lewis, L. Environmental Natural Resource Economics, 2018 (11th edition), Pearson.

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

Additional materials of case studies and academic papers related to the topics will be provided before the class.

Grading Criteria:

Midterm Examination	30%
Final Examination	30%
Group project	15%
Assignment and quiz	25%

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 perspectives of an economist and be able to apply economic concepts and tools to analyze and solve the problems in the fields.

Expected learning outcomes	Evaluation Method
1. Morality & ethics 1.1 Students demonstrate integrity and ethics 1.2 Students recognizes social responsibility and accountability to the society and the environment 1.3 Students recognize the importance of sustainable development and natural resource allocation	Assignment and discussions in class
2. Knowledge 2.1 Students understand problems related to the fields 2.2 Students can apply economic principles to understand the causes of the problems in the fields of natural resource and environmental economics 2.3 Students understand various economic instruments that can be used to solve the problems in the fields	Assignment, quiz and exam
3. Intellectual development 3.1 Students improve critical thinking in analyzing the problems 3.2 Students are sufficiently trained in research skills 3.3 Students demonstrate abilities to analyze and propose policy recommendations using economic concepts and tools	Group project's policy brief
4. Interpersonal skills & responsibilities 4.1 Students are responsible for the assigned tasks 4.2 Students work effectively as a team, demonstrating leadership and teamwork 4.3 Students respects other opinions and provide constructive comments	Assignment and group presentation
5. Quantitative analysis, communication, and information technology skills 5.1 Students can apply mathematical methods in solving the problems in the fields 5.2 Students communicate effectively and select appropriate presentation approach to deliver discussion points and ideas to solve the problems 5.3 Students use information and communication technologies appropriately to analyze the problems and propose policy recommendations.	Exam and group presentation

ACADEMIC CALENDAR & HOLIDAY SEMESTER 1/2023

Semester 1/2023 (August 15 – December 4, 2023)	
<i>the TU Office of the Registrar (TU REG) will process the registration (semester 1/2023) for all BE students who have completed the pre-registration via BE Portal.</i>	July 17 – 20, 2023
Tuition Fee Payment Period (Via TU Greats App)	July 21 – August 11, 2023
Create Plan from Quota via TU Greats App (*ID.66)	August 1 - 9, 2023
Registration via TU Greats App (*ID.66)	August 10, 2023
Classes Begin	August 15, 2023
Add-drop period	August 15 – 28, 2023 <i>(from 9.00 AM of August 15 to 10.30 PM of August 28)</i>
Tuition Fee Payment Period (Via TU Greats App)	August 15 – 29, 2023 <i>(9 AM - 10.30 PM)</i>
Mid-term Examination Period	October 1 – 7, 2023
<i>H.M. King Bhumibol Adulyadej The Great Memorial Day*</i>	<i>October 13, 2023</i>
<i>King Chulalongkorn's Day*</i>	<i>October 23, 2023</i>
Withdrawal period with "W" on record	September 4 – October 22, 2023 <i>(from 9.00 AM of September 4 to 10.30 PM of October 22)</i>
Special Withdrawal with "w" on record	October 24 – November 20, 2023
Last day of class for Semester 1/2023	December 4, 2023
Final exam period	December 12 – 23, 2023
<i>H.M. King Bhumibol Adulyadej The Great's Birthday*</i>	<i>December 5, 2023</i>
<i>Constitution Day*</i>	<i>December 10, 2023</i>
<i>Substitution for Constitution Day*</i>	<i>December 11, 2023</i>
Submitting Forms for Degree Conferral	August 15 – 28, 2023

Remark * Holiday, No classes during this period
Updated: July 24, 2023