

Course Outline

EE475 Natural Resource Economics

Semester 2/2022 (January 9th – May 6th, 2023)

Number of Credit: 3 credits

Prerequisite: EE311

Course Description: Economic theories and tools used for natural resource allocation. Concepts of scarcity and economic rent of natural resources. Allocation of natural resource among current users as well as intertemporal allocation. Market failure due to deficiencies in the property rights system. Government policies and tools for natural resource management and their impacts.

Class Time and Logistic

Class day: Wednesday & Friday

Class time: 09.30 – 11.00 hrs.

Venue: Room 303, Faculty of Economics

Teaching Materials Platform: Google Classroom and MS Team

Instructor:

Name: Dr. Supawan Saelim

Office Hours: Wednesday and Friday at 11:00 – 13:00
at Room 452, 4th Floor, Faculty of Economics

Email: supawans@econ.tu.ac.th

Course Objectives: The course aims to provide in-depth knowledge of sustainable natural resource allocation, applying economic, ecological and environmental aspects of natural resource management to understand the real-world challenges and the impacts of global climate change on resources. Students will be able to apply economic theories and tools for policy considerations to tackle the problems in the field and discuss the potential impacts of policies on natural resource and sustainable economic development.

Course Schedule and Topics:

Week	Date	Topics
1	Jan 11 Jan 13	1. Introduction to economic approaches to the environment and the relationships between natural resources, economic development and the environment
2 3	Jan 18, 20 Jan 25, 27	2. Key economic theories and concepts a) Environmental externalities b) Common property resources and public goods c) Resource allocation over time d) Valuing the environment
4	Feb 1 Feb 3	3. Nonrenewable resources: Scarcity and Abundance
5	Feb 8 Feb 10	4. Renewable resource use: Fisheries
6	Feb 15 Feb 17	5. Sustainable forest management
7	Feb 22 Feb 24	6. Water: Economics and Policies
8	Midterm exam Date: March 1, 2023	
9 10	Mar 8, 10 Mar 15, 17	7. Global climate change: a) Economics and policy responses b) World trade and the environment c) Greening the Economy concept
11 12 13	Mar 22, 24 Mar 29, 31 Apr 5, 7	8. Energy transition: Economics and Policies
14	Songkran Holidays	
15	Apr 19 Apr 21	9. Sustainable development: Institutions and Policies
16	Apr 26 Apr 28	Group project presentations
17	May 3 May 5	Summary and review
Final Exam Date: May 16, 2023		

Main Reading Lists:

[HR] – Harris, Jonathan M. and Roach, Bran. Environmental and Natural Resource Economics: A Contemporary Approach, 2018 (4nd edition), Routledge.

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

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%
Assignment and quiz	25%
Group project	15%

Group project: Students will work in groups of 3-5 to prepare for i) a short paper and ii) oral group presentation on selected topics related to natural resources and environment (to be announced in class).

Expected Learning Outcomes

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