

Course Syllabus

EE476 Environmental Economics

Semester 1/2022 (August 8 – November 26, 2022)

Number of credits:	3 credits (3-0-6)
Lecture Time:	Wednesday and Friday, 09.30 – 11.00 hours
Lecture Venue:	Room 202, Faculty of Economics
Instructor:	Asst. Prof. Dr. Anin Aroonruengsawat Room 518, 5 th floor E-mail: anin@econ.tu.ac.th

Course Description:

Important environmental problems and related theories, the concepts of efficiency and cost-benefit analysis. The effectiveness of policies, measures, and tools to control and solve environmental problems. The estimation of effects of various economic development projects on environment. The concept of sustainable development, social welfare indicators that incorporate environmental impacts.

Prerequisites: EE311

Evaluation

Mid-term examination	35%
Final examination	50%
Group project	15%

Main Textbook

1. Hussen, A. (2018). *Principles of environmental economics and sustainability: an integrated economic and ecological approach*. 4th edition, Routledge. [H]
2. Harris, J. and Roach, B.(2018). *Environmental and natural resource economics: a contemporary approach*. 4th edition, Routledge. [HR]

Topics	Readings
1. Introduction • Related economics concepts • Economy and the environment	[H]Ch. 1,2,3 [HR]Ch. 1,2
2. The theory of environmental externalities • The theory of externalities • Welfare analysis of externalities • Common property and public goods • The environment as a public good	[H]Ch. 3 [HR]Ch. 3,4
3. The economic theory of pollution control: the optimal level of pollution • Marginal abatement cost • Marginal damage cost • The optimal level of pollution	[H]Ch. 4 [HR]Ch. 8
4. The economics of environmental regulation • Emission standards • Effluent charges • Transferable emission credits • Assessing pollution control policies	[H]Ch. 5, 6 [HR]Ch. 8
5. Frameworks for the economic appraisal of environmental project: Cost-Benefit Analysis • The welfare foundation of cost-benefit analysis • Discounting and intergenerational equity • The net present value criterion • Other environmental project evaluation criteria • Cost-Benefit Analysis Example	[H]Ch. 8 [HR]Ch. 7
6. Economic valuation of environmental goods and services • Valuation of environment amenities and avoided damage • Revealed Preference Methods ○ Travel cost method ○ Hedonic pricing method • Stated Preference Methods ○ Contingent valuation method ○ Choice experiment	[H]Ch. 8 [HR]Ch. 6
7. The economics of climate change • The science behind climate change and its impacts • Economic analysis of climate change: theoretical framework of policy guidance • Climate change adaption and mitigation • Climate change policy in practice	[H]Ch. 9 [HR]Ch. 12 & 13
8. World trade and the environment • Environment impacts of trade	[HR]Ch.21

Topics	Readings
• Trade and environment: policy and practice • Trade agreements and the environment	
9. The economics of sustainability • Population and the environment • The concept of sustainable development • Weak sustainability • Strong sustainability	[H]Ch. 12 [HR]Ch. 15 & 22
10. Green accounting and indicators of sustainability • Environmentally adjusted system of national income accounting • Indicators of economic and environment sustainability • Creating a green economy	[H]Ch. 13,14 [HR]Ch. 10,14

Mid-Term Examination: **Wednesday, September 28, 2022: 09.00-11.00 hrs.**

Final Examination: **Friday, December 2, 2022: 09.00-12.00 hrs.**