Course Outline
JEE625 Energy and Environmental Economics, Management and Policy
Semester 1/2020
Room EN3204, 2nd Fl., SEEM Building and Online
Every Tuesday (Tuesday 18 August-22 December 2020), 13.30-16.30

No.	Date	Topics	Details	Lecturers
1	**18 Aug 2019**	Introduction and Discussion on online teaching and learning process	Survey of student background and expected learning outcomes.	Dr. Savitri Garivait
2	**25 Aug 2020**	Discussion on General Overview of Energy and Environmental Economics, Management and Policy	Introduction to energy and energy related environmental issues.	Dr. Savitri Garivait
3	**01 Sep 2020**	Economy and Environment Interactions	Traditional economic system, Ecosystem, Economic and environment systems.	Dr. Athikom Bangviwat
4	**08 Sep 2020**	Efficient resource allocation	Static and dynamic efficiency, efficient energy resource allocation.	Dr. Athikom Bangviwat
5	**15 Sep 2020**	Sustainability and Market failure	Dilemma of economic development and environmental deterioration. Externality and market failure	Dr. Athikom Bangviwat
6	**22 Sep 2020**	Environmental valuation	Measures of economic value in theory and empirical methods for valuing the environment	Dr. Athikom Bangviwat
7	**29 Sep 2019**	Introduction to energy management and the concept of rational energy uses	Concept of rational energy uses and comparisons on ease of uses of energy in various forms and related technology. Energy demand management and energy conservation.	Prof. Surapong Chirarattananon
	06 Oct 2020	**Mid-term Examination 1 and Discussion on Possible Mini-Project Topics**		
8	**20 Oct 2020**	Basic of energy audits	Development of an energy program, planning energy audits and organization, techniques of auditing.	Prof. Surapong Chirarattananon

9	**27 Oct 2020**	Impacts on the environment due to economic activities and energy uses, and solutions.	Environmental impacts due to fossil energy resource development, transportation, transformation and final uses. Solutions and alternative energy technologies for environmental abatement and their limitations.	Dr. Chumnong Sorapipatana
10	**03 Oct 2020**	An overview of energy and environmental policies for sustainable development	Principles of justification of a proper choice in energy and economic development in a long term.	Dr. Chumnong Sorapipatana
	10 Nov 2020	**Mid-term Examination 1 and Discussion on Possible Mini-Project Topics**		
11	**17 Nov 2020**	Management tools: Environmental impact assessment tools and indicators, LCA and environmental standards	Concept of EIA and SEA, and its component. Environmental and health risk assessment, concept of life cycle assessment, environmental international standard.	Prof. Shabbir H. Gheewala
12	**24 Nov 2020**	Sustainability assessment of energy systems	Concept of sustainability assessment. Case-studies: micro-hydro, PV, biomass and biofuels. Mitigation pathways and measures in the context of sustainable development.	Prof. Shabbir H. Gheewala
13	**01 Dec 2020**	Energy and Climate Change: From Global to National Situations	Global energy current situation and perspectives. Energy and climate change interrelationship. Introduction to energy and climate policy.	Dr. Savitri Garivait
14	**08 Dec 2020**	Contemporary energy related environmental issues at national and regional level.	Nature and driving force of national issues. Contradictory thinking and possible solutions. Role of public awareness and participation. Success and failure case-studies.	Dr. Savitri Garivait

15	**15 Dec 2020**	Contemporary energy related environmental issues at global level: climate change and its mitigation options. Mini-projects on case-studies related to contemporary energy	Climate change: trends in stocks and flows of GHGs and their drivers. Approaches to climate change mitigation.	Dr. Savitri Garivait
	22 Dec 2020	**Final Examination + Presentation of mini-projects**		

Grading System

Dr. Chumnong (Final Exam Paper)	10 %
Dr. Athikom (Mid-term Exam Paper)	30 %
Prof. Surapong (Final Exam Paper)	10 %
Prof. Shabbir (Final Exam Paper)	20 %
Dr. Savitri (Assignments and Mini-Projects)	30 %

Instructors

Assoc. Professor Dr. Chumnong Sorapipatana
Dr. Athikom Bangviwat
Prof. Dr. Surapong Chirarattananon
Prof. Dr. Shabbir H. Gheewala
Assoc. Professor Dr. Savitri Garivait (Instructor and Coordinator)

Course Learning Outcome

Students will be able to:

1. Understand key concepts and tools in energy and environment economics, management and policy.
2. Explain key concepts and tools in energy and environment economics, management and policy.
3. Synthesize key concepts and tools in energy and environment economics, management and policy.
4. Apply the acquired key concepts and tools in energy and environment economics, management and policy to solve energy and energy related environmental issues.
5. Communicate in writing and orally the outcome of the applications.