

Course Outline
JEE625 Energy and Environmental Economics, Management and Policy
Semester 1/2019
Room EN3204, 2nd Fl., SEEM Building
Every Tuesday (Tuesday 13 August-03 December 2019), 13.30-16.30

No.	Date	Topics	Details	Lecturers
1	13 Aug 2019	Introduction and Discussion on General Overview of Energy and Environmental Economics, Management and Policy	Survey of student background and expected learning outcomes. Introduction to energy and energy related environmental issues.	Dr. Savitri Garivait
2	20 Aug 2019	Economy and Environment Interactions	Traditional economic system, Ecosystem, Economic and environment systems	Dr. Athikom Bangviwat
3	27 Aug 2019	Efficient resource allocation	Static and dynamic efficiency, efficient energy resource allocation.	Dr. Athikom Bangviwat
4	03 Sep 2019	Sustainability and Market failure	Dilemma of economic development and environmental deterioration. Externality and market failure	Dr. Athikom Bangviwat
5	10 Sep 2019	Environmental valuation	Measures of economic value in theory and empirical methods for valuing the environment	Dr. Athikom Bangviwat
6	17 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
7	24 Sep 2019	Basic of energy audits	Development of an energy program, planning energy audits and organization, techniques of auditing.	Prof. Surapong Chirarattananon
	01 Oct 2019	Mid-term Examination and [Discussion on presentations of mini-project topics to be presented at the end of the semester]		
8	08 Oct 2019	Impacts on the environment due to economic activities and energy uses, and	Environmental impacts due to fossil energy resource development, transportation,	Dr. Chumnong Sorapipatana

No.	Date	Topics	Details	Lecturers
		solutions.	transformation and final uses. Solutions and alternative energy technologies for environmental abatement and their limitations.	
9	15 Oct 2019	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
12	22 Oct 2019	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
13	29 Oct 2019	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
10	05 Nov 2019	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	12 Nov 2019	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	19 Nov 2019	Contemporary energy related environmental issues at global level: climate change and its mitigation options. Mini-projects on case-studies related to contemporary energy related environmental	Climate change: trends in stocks and flows of GHGs and their drivers. Approaches to climate change mitigation.	Dr. Savitri Garivait

No.	Date	Topics	Details	Lecturers
		issues at national, regional and global scales.		
	26 Nov 2019	Presentations of mini-projects		
	03 Dec 2019	Final Examination		

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.