

Master of Engineering/Master of Science Program in Energy Technology and Management (International Program)

M.Eng. (Energy Technology and Management)

M.Sc. (Energy Technology and Management)

**Philosophy:**

The Joint Graduate School of Energy and Environment, King Mongkut's University of Technology Thonburi has the founding philosophy to be a national center of excellence for education and training in energy technology. It aims to produce high caliber human resources for science and technology related to energy and environment as a result of the impact of the production and utilization of energy. The Master of Engineering/Master of Science in Energy Technology and Management program is intended to produce professional engineers with international standard. This program also meets the school's philosophy to produce high quality personnel with professional ethics who are responsible for society. The graduates can effectively solve practical problems occurring in industrial and government sectors.

**Objectives:**

1. To produce high level engineers and scientists who have integrated educational background in technology and energy management with the ability to analyze problems, can communicate well in English and work professionally.
2. To instill in new engineers and scientists the understanding of environmental impact as a result of the production and utilization of energy.
3. To create new knowledge in managing and solving energy and environment problems in the production and services sectors.

**Qualifications of a prospective candidate:**

1. Has a bachelor's degree with honors in science/engineering or technology from tertiary institutes approved by the Office of Civil Service Commission or the University Council or has other qualifications as stipulated by JGSEE, or
2. Has a bachelor's degree with honors in science/ engineering or technology from tertiary institutes approved by the Office of Civil Service Commission or the University Council and has research studies published nationally or internationally or the institutes' program faculties have considered appropriate for studying in the program
3. Has English proficiency corresponding to the level required by JGSEE.

**Professions after graduation:**

1. Scientists
2. Academics in energy
3. Analysts and planners in energy policy
4. Lecturers
5. Energy consultants
6. Database administrators in energy

7. Project coordinators
8. Specialists in energy in government and private sectors

### Curriculum

Plan A-1: Program component thesis 21 credits and graduation requirements at least 1 national journal paper

Plan A-2: Program component thesis 12 credits and internship or international internship 9 credits, graduation requirements at least 1 international conference paper

Plan B: Program component Research study 6 credits.

### Curriculum Components

Course	Plan		
	Plan A-1	Plan A-2	Plan A-B
<u>Compulsory</u>	7	7	7
<u>Specific Compulsory Course</u>	9	9	9
<u>Elective</u>	3	3	18
<u>Internship or international internship</u>	-	9	-
<u>Research study</u>	-	-	6
<u>Thesis</u>	21	12	-
Total	40	40	40

COURSE STRUCTURE

Plan A-1, Plan A-2

Semester 1

JEE 601 Seminar for M.Eng/M.Sc (Energy Technology & Management)	1 (1-0-3)
JEE 613 Research Methodology	3 (3-0-9)
JEE 625 Energy and Environmental Economics, Management and Policy	3 (3-0-9)
JEE XXX Specific Compulsory Course (research group)	3 (3-0-9)
JEEXXX Specific Compulsory Course (research group)	3 (3-0-9)
Total	13 credits

Semester 2

JEE XXX Specific Compulsory Course (research group)	3 (3-0-9)
XXX Elective (As recommended by advisor)	3 (3-0-9)
JEE 630 Thesis	6 (0-0-18)
Total	12 credits

Semester 3

Study Plan	Plan	
	Plan A-1	Plan A-2
JEE 630 Thesis (Energy Technology & Management)	9	-
JEE 616 Internship/ JEE 617 International Internship	-	9
Total	9	9

Semester 4

JEE 630 Thesis	6 (0-0-18)
Total	6 credits

**Plan B**

Semester 1

JEE 601 Seminar for M.Eng/M.Sc (Energy Technology & Management)	1 (1-0-3)
JEE 631 Strategic Planning and Project Management	3 (3-0-9)
JEE 625 Energy and Environmental Economics, Management and Policy	3 (3-0-9)
JEE 623 Principle of Accounting and Financial Management	3 (3-0-9)
JEE 624 Principle of Management and Administration	3 (3-0-9)
Total	13 credits

Semester 2

JEE 629 Marketing Research	3 (3-0-9)
JEE 634 Climate Influence on Buildings and End-Use Requirements	3 (3-0-9)
JEE 653 Solar Energy	3 (3-0-9)
JEE 658 Renewable Energy Technologies	3 (3-0-9)
Total	12 credits

Semester 3

JEE 659 Energy from Biomass	3 (3-0-9)
JEE 671 Life Cycle Assessment	3 (3-0-9)
JEE 698 Carbon Trading	3 (3-0-9)
Total	9 credits

Semester 4

JEE 618 Research study	6 (0-0-18)
Total	6 credits