MASTER OF ENGINEERING PROGRAM IN

ENGINEERING TECHNOLOGY

CURRICULUM TITLE

Master of Engineering Program in Engineering Technology (International Program)

DEGREE TITLE

Master of Engineering (Engineering Technology)

ACADEMIC SYSTEM

1. All courses are conducted in English. An academic year is divided into 2 semesters. Each semester consists of 15 weeks. Courses may be offered for a summer semester of at least 8 weeks duration. The total number of lecture hours required for the summer semester is the same as that for the regular semester. Enrollment for summer courses is optional.

2. Curriculum

   2.1 Study Plan

   The study plan consists of prescribed coursework (24 credits) and thesis (15 credits). A total of 39 credits is required for completion of the program.

   2.2 Thesis

   2.2.1 A student can register for a thesis after he or she has studied for at least 1 regular semester or has gained 12 credits with a minimum cumulative GPA of 3.00.

   2.2.2 Thesis Committee

   The Thesis Committee consists of at least 3 members:

   One principal advisor, one faculty member of SIIT or Thammasat University (TU), and at least one member not being affiliated with TU who will serve as an external committee member.

   - Each committee member, who is not the external committee member, must be a faculty member of SIIT or TU, or an expert outside TU, with a doctoral degree or equivalent, or an academic rank of at least associate professor in the program or a related program.
   - The principal advisor must be an SIIT faculty member in the program or a related program.
   - A co-advisor (if any) must be a faculty member of SIIT or TU, or an expert outside TU, with a doctoral degree or equivalent, or an academic rank of at least associate professor in the program or a related program.
   - The external committee member must be an expert outside TU with a doctoral degree and holding an academic rank of at least assistant professor or equivalent, or without a doctoral degree but holding an academic rank of at least associate professor or equivalent. The specialization of the external committee member must be in a field related to the thesis.
   - The number of the committee members who are not the thesis advisor or co-advisor must not be less than the number of the committee members who are the thesis advisor and co-advisor. The number of the committee members who are faculty members of SIIT or TU must not be less than that of the committee members from outside.

   2.2.3 Thesis Final Defense Committee

   The Thesis Final Defense Committee consists of the same members as the Thesis Committee. However, the defense committee must be chaired by a thesis committee member who is not the advisor or co-advisor.

GRADUATION REQUIREMENTS

To graduate, students must meet the following minimum requirements:

1. Twenty-four credits of taught courses required by the curriculum with a cumulative GPA of at least 3.00. In addition, the grade of each of these courses must be at least “C.”

2. Fifteen credits of thesis work and passing a thesis defense

3. Approval of the thesis by the Thesis Committee

4. Having at least one paper on thesis findings accepted for publication in an international journal, or a national journal approved by the Academic Review and Rank Assessment Committee of SIIT, or at least one paper accepted for publication in international conference proceedings

5. Having satisfied one of the following English proficiency requirements:

   - A TOEFL (official or institutional) score of at least 550 (paper-based), or 213 (computer-based), or 79 (internet-based)
   - An IELTS score of at least 6.5
   - A TU-GET score of at least 550
   - A TOEIC score of not less than 750 and pass an English efficiency evaluation by an SIIT native English speaker

   Exemption: An applicant who is a native English speaking student from Australia, Canada, New Zealand, United Kingdom, or USA may be exempted from the above English proficiency requirements if he/she passes an interview by an SIIT interviewing committee consisting of 3 English native speaking instructors.

CURRICULUM

1. Total Credits Requirement

A total of 39 credits is required for completion of the program.

2. Structure and Components

2.1	**Compulsory Courses**	**6**	**Credits**
2.2	**Compulsory Elective Courses**	**15**	**Credits**
2.1.1	General Compulsory Elective Courses	3	Credits
2.1.2	Specialized Compulsory Elective Courses from one of the following seven majors of study, i.e.,	12	Credits

1. Chemical Engineering
2. Civil Engineering
3. Electrical Engineering
4. Industrial Engineering and Manufacturing Systems
5. Mechanical Engineering
6. Sustainable Energy and Environment
7. Materials Science and Engineering

2.3	**Elective Courses**	**3**	**Credits**
2.4	**Master's Thesis**	**15**	**Credits**
	Total	**39**	**Credits**

3. List of Courses in the Curriculum

Credits (lecture-practice-self study hours)

3.1 Compulsory Courses, 6 Credits

ES605	Research Methodology	2(2-0-6)
ES606	Research Seminar	1(1-0-3)
ET601	Computer Applications for Engineers	3(3-0-9)

3.2 Compulsory Elective Courses, 15 credits

3.2.1 General Compulsory Elective Courses, 3 credits

Select one of the following courses:

ES601	Advanced Engineering Mathematics	3(3-0-9)
ES612	Advanced Business Statistics	3(3-0-9)
ET600	Numerical Methods for Engineers	3(3-0-9)
ET673	Principle of Sustainable Environmental Engineering	3(3-0-9)
ICT600	Computational Mathematics	3(3-0-9)
SE600	Decision Making and Optimization	3(3-0-9)

Credits (lecture-practice-self study hours)

3.2.2 Specialized Compulsory Elective Courses, 12 credits from one of the following majors

1) ***Chemical Engineering***

ET610	Special Topic in Chemical Engineering	3(3-0-9)
ET611	Current Topics in Chemical Engineering	3(3-0-9)
ET61x	Technical Elective	3(3-0-9)
ET61x	Technical Elective	3(3-0-9)

2) ***Civil Engineering***

ET620	Special Topic in Civil Engineering	3(3-0-9)
ET621	Current Topics in Civil Engineering	3(3-0-9)
ET62x	Technical Elective	3(3-0-9)
ET62x	Technical Elective	3(3-0-9)

3) ***Electrical Engineering***

ET630	Special Topic in Electrical Engineering	3(3-0-9)
ET631	Current Topics in Electrical Engineering	3(3-0-9)
ET63x	Technical Elective	3(3-0-9)
ET63x	Technical Elective	3(3-0-9)

4) ***Industrial Engineering and Manufacturing Systems***

ET640	Special Topic in Industrial Engineering and Manufacturing Systems	3(3-0-9)
ET641	Current Topics in Industrial Engineering and Manufacturing Systems	3(3-0-9)
ET64x	Technical Elective or SE611-7	3(3-0-9)
ET64x	Technical Elective or SE611-7	3(3-0-9)

5) ***Mechanical Engineering***

ET650	Special Topic in Mechanical Engineering	3(3-0-9)
ET651	Current Topics in Mechanical Engineering	3(3-0-9)
ET65x	Technical Elective	3(3-0-9)
ET65x	Technical Elective	3(3-0-9)

6) ***Sustainable Energy and Environment***

ET660	Special Topic in Sustainable Energy and Environment	3(3-0-9)
ET661	Current Topics in Sustainable Energy and Environment	3(3-0-9)
ET66x	Technical Elective or ET67x	3(3-0-9)
ET66x	Technical Elective or ET67x	3(3-0-9)

7) ***Materials Science and Engineering***

ET680	Special Topic in Materials Science and Engineering	3(3-0-9)
ET681	Current Topics in Materials Science and Engineering	3(3-0-9)
ET68x	Technical Elective	3(3-0-9)
ET68x	Technical Elective	3(3-0-9)

4.3 Elective Course, 3 credits

ET6xx or SE611-7 or ICTxxx	Technical Elective	3(3-0-9)

4.4 Master's Thesis, 15 credits

ET800	Thesis	15