

# **MASTER OF SCIENCE PROGRAM IN**

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# **ENGINEERING AND TECHNOLOGY**

## CURRICULUM TITLE

Master of Science Program in Engineering and Technology (International Program)

## DEGREE TITLE

Master of Science (Engineering and 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
    - 2.1.1 Plan A1

A total of 39 credits of thesis is required for completion of the program.
    - 2.1.2 Plan A2

This study plan consists of prescribed coursework (12 credits) and thesis (27 credits). A total of 39 credits is required for completion of the program.
  - 2.2 Thesis
    - 2.2.1 Plan A1

A students can register for a thesis in the first semester.
    - 2.2.2 Plan A2

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.
    - 2.2.3 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.
    - 2.2.4 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. Plan A1

- 1.1 Students must successfully complete 39 credits of thesis.
- 1.2 At least one paper on thesis results must have been accepted for publication in a reputable international journal approved by the Academic Review and Rank Assessment Committee (ARRAC). The following alternate requirements may be used: one national journal paper (accepted) and one national conference paper in proceedings (accepted), or one international conference proceedings paper (accepted and registered for presentation) and one international conference proceedings paper (submitted).
- 1.3 Approval of the thesis by Thesis Committee, and passing a thesis defense.
- 1.4 Having satisfied one of the following English proficiency requirements:
  - A TOEFL score of not less than 550 (paper-based) or 213 (computer-based), or 79 (internet-based)
  - An IELTS score of not less than 6.5
  - A TU-GET score of not less than 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.

### 2. Plan A2

- 2.1 Twelve credits of courses (see the course descriptions) with a GPA of at least 3.00 or equivalent.
- 2.2 Twenty seven credits of thesis with grade "S".
- 2.3 At least one paper on thesis results must have been accepted for publication in a reputable international journal approved by the Academic Review and Rank Assessment Committee (ARRAC). The following alternate requirements may be used: one national journal paper (accepted) and one national conference paper in proceedings (accepted), or one international conference proceedings paper (accepted and registered for presentation) and one international conference proceedings paper (submitted).
- 2.4 Approval of the thesis by Thesis Committee, and passing a thesis defense.
- 2.5 Having satisfied one of the following English proficiency requirements:
  - A TOEFL score of not less than 550 (paper-based) or 213 (computer-based), or 79 (internet-based)
  - An IELTS score of not less than 6.5
  - A TU-GET score of not less than 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

- 1.1 Plan A1, a total of 39 credits is required for completion of the program.
- 1.2 Plan A2, a total of 39 credits is required for completion of the program.

## 2. Structure and Components

### 2.1 Plan A1

Thesis	39	Credits
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### 2.2 Plan A2

2.2.1 Compulsory Courses	6	Credits
2.2.2 Compulsory Elective Course	3	Credits
2.2.3 Elective Course	3	Credits
2.2.4 Thesis	27	Credits

<b>Total</b>	<b><u>39</u></b>	<b>Credits</b>
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## 3. List of Courses in the Curriculum

*Credits (lecture-practice-self study hours)*

### 3.1 Plan A1, 39 credits

ES800 Thesis	39
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### 3.2 Plan A2, 39 credits

#### 3.2.1 Compulsory Courses, 6 credits

ES603 Special Study	3(3-0-9)
ES605 Research Methodology	2(2-0-6)
ES606 Research Seminar	1(1-0-3)

#### 3.2.2 Compulsory Elective Course, 3 credits

Select one of the following courses:

ES601 Advanced Engineering Mathematics	3(3-0-9)
ES611 Theory of Computation	3(3-0-9)
ES612 Advanced Business Statistics	3(3-0-9)
ET600 Numerical Methods for Engineers	3(3-0-9)
ICT600 Computational Mathematics	3(3-0-9)
SE600 Decision Making and Optimization	3(3-0-9)

#### 3.2.3 Elective Course, 3 credits

ES604 Selected Topic	3(3-0-9)
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#### 3.2.4 Thesis, 27 credits

ES800 Thesis	27
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