

# **MASTER OF ENGINEERING PROGRAM IN**

## **LOGISTICS AND SUPPLY CHAIN SYSTEMS ENGINEERING**

## CURRICULUM TITLE

Master of Engineering Program in Logistics and Supply Chain Systems Engineering (International Program)

## DEGREE TITLE

Master of Engineering (Logistics and Supply Chain Systems Engineering)

## ACADEMIC SYSTEM

1. All courses are conducted in English. An academic year is divided into two semesters. Each semester consists of 15 weeks. Courses may be offered for a summer semester of at least eight 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 A

This 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 Study Plan B

This study plan focuses on coursework (not less than 33 credits). Independent study (not less than 6 credits) and comprehensive examination are required for completion of the program.
3. Thesis (Study Plan A)
  - 3.1 A student can register for thesis credit(s) 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.
  - 3.2 Thesis's 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.
  - 3.3 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.
4. Independent Study (Study Plan B)
  - 4.1 A student can register for independent study after he or she has gained at least 18 credits with a minimum cumulative GPA of 3.00.
  - 4.2 A student can take the final examination of an independent study only after he or she obtained "P" (Pass) for his or her comprehensive examination and satisfied English proficiency requirements.
  - 4.3 Independent Study Examination

SIIT shall appoint a project advisor and, if required, a project co-advisor to advise the student on the independent study.

4.3.1 The project advisor must be a faculty member of SIIT with a doctoral degree or equivalent, or has an academic rank of at least associate professor in the program or a related program.

4.3.2 SIIT shall appoint a project committee of at least 3 persons consisting of the project advisor, project co-advisor (if needed), faculty member(s) of SIIT, and an external member if necessary.

#### 4.4 Comprehensive Examination

4.4.1 A comprehensive examination can be taken after the student has gained 24 credits with a minimum cumulative GPA of 3.00.

4.4.2 A student must pass the comprehensive examination within a maximum of three times. If the student cannot pass the comprehensive examination, the status of the student will be terminated. Results of all comprehensive examinations will be recorded in the student's academic record.

## GRADUATION REQUIREMENTS

### 1. Graduation requirements (Study Plan A)

Students must meet the following minimum requirements:

1.1 Twenty-four credits of 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."

1.2 Fifteen credits of thesis work with grade "S" and passing a thesis defense.

1.3 Approval of the thesis by the thesis committee.

1.4 At least one paper on thesis findings has been 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 has been accepted for publication in international conference proceedings.

1.5 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.

### 2. Graduation requirements (Study Plan B)

Students must meet the following minimum requirements:

2.1 Thirty-three credits of 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."

2.2 Having obtained "S" in his or her independent study for six credits and passing the comprehensive examination.

2.3 At least one paper on the findings of the independent study has been submitted to SIIT for consideration on submission for publication in journal or conference proceedings.

2.4 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

Students must satisfy one of the above English proficiency requirements before the final independent study examination.

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 Study Plan A

2.1.1	Compulsory Courses	9	Credits
2.1.2	Compulsory Elective Courses	15	Credits
2.1.3	Master's Thesis	15	Credits
	<b>Total</b>	<b>39</b>	<b>Credits</b>

### 2.2 Study Plan B

2.2.1	Compulsory Courses	9	Credits
2.2.2	Compulsory Elective Courses	24	Credits
2.2.3	Independent Study	6	Credits
	<b>Total</b>	<b>39</b>	<b>Credits</b>

## 3. List of Courses in the Curriculum

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

### 3.1 Compulsory Courses, 9 credits

ES605	Research Methodology	2(2-0-6)
ES606	Research Seminar	1(1-0-3)
SE601	Logistics and Supply Chain Systems	3(3-0-9)
SE602	Production Logistics	3(3-0-9)

### 3.2 Compulsory Elective Courses

#### 3.2.1 *Option I: Supply Chain Systems Engineering*

##### 3.2.1.1 *Study Plan A, 15 credits*

SE600	Decision Making and Optimization	3(3-0-9)
or ET600	Numerical Methods for Engineers	3(3-0-9)
or ICT600	Computational Mathematics	3(3-0-9)
<i>and</i>		
SE61x or SE63x	Technical Elective Course*	3(3-0-9)
SE61x or SE63x	Technical Elective Course*	3(3-0-9)
SE61x or SE63x	Technical Elective Course*	3(3-0-9)
SE61x or SE63x	Technical Elective Course*	3(3-0-9)

##### 3.2.1.2 *Study Plan B, 24 credits*

SE600	Decision Making and Optimization	3(3-0-9)
or ET600	Numerical Methods for Engineers	3(3-0-9)
or ICT600	Computational Mathematics	3(3-0-9)
<i>and</i>		
SE61x or SE63x	Technical Elective Course**	3(3-0-9)
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SE61x or SE63x	Technical Elective Course**	3(3-0-9)
SE61x or SE63x	Technical Elective Course**	3(3-0-9)

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

List of Technical Elective Courses for Supply Chain Systems Engineering

\* For Study Plan A, select 4 courses (12 credits) from the following courses.

\*\* For Study Plan B, select 7 courses (21 credits) from the following courses.

SE610	Simulation Modeling and Analysis in Supply Chain	3(3-0-9)
SE611	Procurement Logistics	3(3-0-9)
SE612	Laws and Regulations in Logistics	3(3-0-9)
SE613	Transportation Systems Design and Analysis	3(3-0-9)
SE614	Warehouse Design and Operations	3(3-0-9)
SE615	Operations Scheduling	3(3-0-9)
SE616	Design of Experiments in Supply Chain Systems	3(3-0-9)
SE617	Accounting and Financial Management for Logistics and Supply Chain Systems	3(3-0-9)
SE630	Special Topics in Logistics and Supply Chain Systems I	3(3-0-9)
SE631	Special Topics in Logistics and Supply Chain Systems II	3(3-0-9)
SE632	Current Topics in Logistics and Supply Chain Systems I	3(3-0-9)
SE633	Current Topics in Logistics and Supply Chain Systems II	3(3-0-9)

**3.2.2 Option II: Services Science and Engineering**

**3.2.2.1 Study Plan A, 15 credits**

SE600	Decision Making and Optimization	3(3-0-9)
or ET600	Numerical Methods for Engineers	3(3-0-9)
or ICT600	Computational Mathematics	3(3-0-9)
<i>and</i>		
SE62x or SE64x	Technical Elective Course*	3(3-0-9)
SE62x or SE64x	Technical Elective Course*	3(3-0-9)
SE62x or SE64x	Technical Elective Course*	3(3-0-9)
SE62x or SE64x	Technical Elective Course*	3(3-0-9)

**3.2.2.2 Study Plan B, 24 credits**

SE600	Decision Making and Optimization	3(3-0-9)
or ET600	Numerical Methods for Engineers	3(3-0-9)
or ICT600	Computational Mathematics	3(3-0-9)
<i>and</i>		
SE62x or SE64x	Technical Elective Course**	3(3-0-9)
SE62x or SE64x	Technical Elective Course**	3(3-0-9)
SE62x or SE64x	Technical Elective Course**	3(3-0-9)
SE62x or SE64x	Technical Elective Course**	3(3-0-9)
SE62x or SE64x	Technical Elective Course**	3(3-0-9)
SE62x or SE64x	Technical Elective Course**	3(3-0-9)
SE62x or SE64x	Technical Elective Course**	3(3-0-9)

List of Technical Elective Courses for Services Science and Engineering

\* For Study Plan A, select 4 courses (12 credits) from the following courses.

\*\* For Study Plan B, select 7 courses (21 credits) from the following courses.

SE620	Services Science and Engineering	3(3-0-9)
SE621	Human Resources and Marketing Management	3(3-0-9)
SE622	Services System Simulation	3(3-0-9)
SE623	Organizational Behavior	3(3-0-9)
SE624	Enterprise Resources Management	3(3-0-9)
SE625	Intermediate Resource Economics	3(3-0-9)
SE626	Strategic Marketing Management	3(3-0-9)
SE627	IT Project Management	3(3-0-9)
SE640	Special Topics in Services Science and Engineering I	3(3-0-9)
SE641	Special Topics in Services Science and Engineering II	3(3-0-9)
SE642	Current Topics in Services Science and Engineering I	3(3-0-9)
SE643	Current Topics in Services Science and Engineering II	3(3-0-9)

**3.3 Master's Thesis/Independent Study**

**Study Plan A**

SE800	Thesis	15
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**Study Plan B**

SE799	Independent Study	6
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