



DOCTORAL DEGREE PROGRAM

DOCTOR OF PHILOSOPHY PROGRAM IN ENGINEERING AND TECHNOLOGY

CURRICULUM TITLE

Doctor of Philosophy Program in Engineering and Technology (International Program)

DEGREE TITLE

Doctor of Philosophy (Engineering and Technology)

APPLICANT'S QUALIFICATIONS

1. Applicant

1.1 Plan 1.1

1.1.1 Option 1

A graduate of a master's degree in engineering, science, or related fields with very good academic records (normally with cumulative GPA of not less than 3.50 or not less than 3.00 with at least one international journal publication, or a master's degree graduate of SIIT with at least one international journal publication).

1.1.2 Option 2 (For external students)

This option is designed for graduates of a master's degree in engineering, science, or related fields with very good academic records. In case that an applicant is a full time employee of an external organization or a company, he/she must have a dissertation topic related to the work in his/her organization or company, and his or her work must lead to the proposed dissertation topic.

1.2 Plan 2.1

A graduate of a master's degree in engineering, science, or related fields with very good academic records (normally with cumulative GPA of not less than 3.50 or not less than 3.00 with at least one international journal publication).

2. The applicant must submit an official score of one of the following English language tests:

- TOEFL score of not less than 400 (paper-based), or 97 (computer-based), or 32 (internet-based)
- IELTS score of not less than 4.5
- TU-GET score of not less than 400
- TOEIC score of not less than 500

The score must not be older than two years from the date on which it was issued, to the date of the application for admission to the program.

In the case of no English score or a score less than the above requirements, the applicant may be admitted with conditions that he/she must take SIIT English remedial courses and/or SIIT English proficiency tests, and meet the requirements set by the institute.

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.

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 1.1

A total of 60 credits of thesis is required for completion of the program.

2.1.2 Plan 2.1

This study plan consists of prescribed coursework (12 credits) and thesis (48 credits). A total of 60 credits is required for completion of the program.

2.2 Thesis

2.2.1 Plan 1.1

A student can register for a thesis in the first semester and must have grade "P" (Pass) in a qualification examination within the first semester.

2.2.2 Plan 2.1

A student can register for a thesis after he or she has studied for at least 2 semesters or has gained 12 credits with a minimum cumulative GPA of 3.00, and has grade "P" (Pass) in a qualification examination.

2.3 Thesis Committee

The thesis committee must consist of at least 5 members as follows:

- Principal advisor: The principal advisor must be an SIIT faculty member in a corresponding or related academic program.
- Co-advisor (if any): A co-advisor must be an SIIT or TU faculty member, or an expert outside TU, with a doctoral degree or equivalent, or with an academic rank of at least associate professor in a corresponding or related academic program.
- Expert outside TU: The expert outside TU must hold a doctoral degree or equivalent, or have an academic rank of associate professor or higher.
- Other thesis committee members: Other thesis committee members must be SIIT or TU faculty members with a doctoral degree or equivalent, or with an academic rank of associate professor or higher.

The number of thesis committee members who are not the principal advisor or a co-advisor must not be fewer than the number of those who are the principal advisor or a co-advisor.

The number of thesis committee members who are SIIT or TU faculty members must not be fewer than the number of those who are experts outside TU.

The above thesis committee shall also serve as the committees for both the proposal and final thesis defenses. However, the chairpersons of both defenses must be the expert outside TU.

2.4 External Examiner

The SIIT Academic Review and Rank Assessment Committee shall appoint an expert outside TU with a doctoral degree and an academic rank of professor, who is not a thesis committee member, to serve as the external examiner.

PERIOD OF STUDY

The minimum period of study to complete the program is 3 academic years, and the maximum is 6 academic years.

REGISTRATION

The student must enroll in courses and/or register for a thesis totaling at least 6 credits, but not more than 15 credits per semester for a regular semester and not more than 6 credits for a summer semester.

GRADUATION REQUIREMENTS

To graduate, students must meet the following minimum requirements:

1. Plan 1.1

1.1 Option I

- 1.1.1 Having successfully completed 60 credits of thesis
- 1.1.2 Approval of the thesis by Thesis Committee and passing a thesis defense
- 1.1.3 Having two international journal papers (accepted), with at least one paper accepted for publication in a reputable international journal approved by the Academic Review and Rank Assessment Committee, and one international conference proceedings paper (accepted) or one national journal paper (accepted).
- 1.1.4 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) or Institutional TOEFL 550
 - An IELTS score of not less than 6.5
 - A TU-GET score of not less than 550

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.

1.2 Option II

- 1.2.1 Having successfully completed 60 credits of thesis
- 1.2.2 Approval of the thesis by Thesis Committee and passing a thesis defense
- 1.2.3 Having thesis work presentation every semester including status maintaining semesters.
- 1.2.4 Regular consultation with his/her advisor during the period of study.
- 1.2.5 Having two international journal papers with impact factor (accepted), and one international conference proceedings paper (accepted) or one national journal paper (accepted).
- 1.2.6 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) or Institutional TOEFL 550
 - An IELTS score of not less than 6.5
 - A TU-GET score of not less than 550

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 2.1

- 2.1 Having successfully completed 60 credits comprising at least 12 credits of coursework and at least 48 credits of thesis
- 2.2 Cumulative GPA of at least 3.00 or equivalent
- 2.3 Having at least a "B" grade in each required courses
- 2.4 Having two international journal papers (accepted), with at least one paper accepted for publication in a reputable international journal approved by the Academic Review and Rank Assessment Committee, and one international conference proceedings paper (accepted) or one national journal paper (accepted).
- 2.5 Approval of Thesis by the Thesis committee and passing a thesis defense
- 2.6 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) or Institutional TOEFL 550
 - An IELTS score of not less than 6.5
 - A TU-GET score of not less than 550

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.

TRANSFERRED CREDITS

A maximum of 12 credits of courses with all grades B or better can be transferred (For plan 2.1 only).

CURRICULUM

1. Total Credits Requirement

- 1.1 Plan 1.1, 60 credits of thesis
- 1.2 Plan 2.1, 48 credits of thesis and 12 credits of courses with a GPA of at least 3.00 or equivalent.

2. Structure and Components

2.1	Plan 1.1 Doctoral Thesis	60 Credits
2.2	Plan 2.1	
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	Doctoral Thesis	48 Credits
	Total	60 Credits

3. List of Courses in the Curriculum

Credits (lecture-practice-self study hours)

3.1 Plan 1.1		
ES903	Doctoral Dissertation	60
3.2 Plan 2.1		
3.2.1	Compulsory Courses, 6 Credits	
ES803	Special Study	3(3-0-9)
ES805	Research Methodology	2(2-0-6)
ES806	Research Seminar	1(1-0-3)
3.2.2	Compulsory Elective Course, 3 Credits	
	Select one of the following courses:	
ES801	Advanced Engineering Mathematics	3(3-0-9)
ES811	Theory of Computation	3(3-0-9)
ES812	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	
ES804	Selected Topic	3(3-0-9)
3.2.4	Doctoral Thesis, 48 credits	
ES901	Doctoral Dissertation	48