

Doctor of Philosophy Programme in Computer Science (International Programme)
Faculty of Information and Communication Technology

Admission Requirements

A candidate must:

1. hold a Master’s degree in one of the following fields: computer science, computer engineering, or computer related areas with a minimum grade point average (GPA) 3.5;
2. have a TOEFL ITP score of at least 500, TOEFL Internet-based score of 61 or IELTS score of 5.

Exemptions from the above conditions may be granted by the Programme Committee and the Dean of the Faculty of Graduate Studies under exceptional circumstances.

Curriculum Structure

Plan 1: Do Research only, no course work.	Credit
Course works	Non-Credit
Dissertation	48
Plan 2: Do course work and Research	
Required Courses	9
Elective Courses	3
Dissertation	36
	Credit
Plan 1	
Students with Plan 1 must enroll 3 Seminar Courses as (Non-Credit)/Audit	
ITCS 671 Seminar in Computer Science I	1(1-0-2)
ITCS 672 Seminar in Computer Science II	1(1-0-2)
ITCS 673 Seminar in Computer Science III	1(1-0-2)
Plan 2	
Required Courses	
ITCS 531 Mathematics for Computer Science	3(3-0-6)
ITCS 532 Foundations of Computational Science	3(3-0-6)
ITCS 671 Seminar in Computer Science I	1(1-0-2)
ITCS 672 Seminar in Computer Science II	1(1-0-2)
ITCS 673 Seminar in Computer Science III	1(1-0-2)
Elective Courses	
1. Database Systems Category	
ITCS 628 Data Mining and Knowledge Discovery	3(3-0-6)
ITCS 629 Knowledge Engineering	3(3-0-6)
ITCS 682 Advanced Database Systems	3(3-0-6)

2. Networks and Security category

ITCS	551	Service Oriented and Cloud Computing	3(3-0-6)
ITCS	554	Information Security Management	3(3-0-6)
ITCS	634	Queuing Modeling in Computer Communication Networks	3(3-0-6)
ITCS	638	Networks and Distributed Systems Security	3(3-0-6)
ITCS	653	Advanced Computer Architecture	3(3-0-6)
ITCS	687	Advanced Computer Security	3(3-0-6)

3. Artificial Intelligence Category

ITCS	660	Heuristic Methods for Optimization	3(3-0-6)
ITCS	661	Advanced Artificial Intelligence	3(3-0-6)
ITCS	662	Advanced Pattern Recognition	3(3-0-6)
ITCS	663	Image and Signal Processing	3(3-0-6)
ITCS	665	Natural Language Processing	3(3-0-6)
ITCS	667	Advanced Computer Vision	3(3-0-6)

4. Software Engineering

ITCS	642	Software Engineering Management	3(3-0-6)
ITCS	644	Software Quality Assurance	3(3-0-6)
ITCS	646	Requirements Engineering	3(3-0-6)
ITCS	651	Model-Driven Design and Development	3(3-0-6)
ITCS	657	Validation and Verification	3(3-0-6)

5. Other Elective Courses

ITCS	571	Numerical Methods for Mathematical Optimization	3(3-0-6)
ITCS	695	Independent Study	3(0-6-3)

Dissertation

ITCS	699	Dissertation (Plan 2)	36(0-108-0)
ITCS	898	Dissertation (Plan 1)	48(0-144-0)

*** These may change in cases where there are suggestions for the improvement of the curriculum**

Additional advantages of the programme

The Ph.D. in Computer Science program offers advanced computer science knowledge to students who seek to become a specialist in a specific area of computer science. The program is offered fully in English and cover different areas of research such as computer networks and security, intelligent systems, database and knowledge management, computer architecture and systems, software engineering, information retrieval, bioinformatics, health informatics, and multimedia systems.

The Faculty of ICT collaborates with top universities around the world. Students will have opportunities to work with top researchers in Thailand and outside Thailand to create innovation and publish their work in high impact journals and conference proceedings.

Details of Scholarships

The Faculty of ICT offers a number of full-time scholarships with the reduced tuition fee and monthly allowance of 20,000 Baht per month to outstanding students with good background in research experiences.

Additional information for applicants

To admit to the PhD program, all applicants must pass both English interview and proposal presentation after they presented to the admission committee of the Faculty.

Application Process

- Application is only available via online application at **www.grad.mahidol.ac.th**
- All necessary documents must be submitted and given to the committee before the preliminary interview can be conducted.

Proposal / Concept Paper

1. Statement of purpose describing your intended area of research as well as the brief description of your experiences.
2. List of papers published in the international conferences/journals.
3. CV or Resume describing your education and working experiences

Required Documents

Prepare the following required documents to submit via online admission system or post:

1. Completed an Online Application at **www.grad.mahidol.ac.th** which comprised with
 - Form A** : Application Form
 - Form B** : Background and Proposed Field of Study
 - Form C** : Recommendation Forms (directly submitted by at least 2 referees)
2. Two copies of Degree Certificate (with officially certified English translation)
3. Two copies of Academic Transcript (with officially certified English translation)
4. Two copies of Recent Photos (Passport size)
5. Two copies of Passport
6. Two copies of English certificate (TOEFL/ IELTS/ MU-Grad Test)

(For Doctoral Program)

- TOEFL ITP score of at least 500, TOEFL Internet-based score of 61, or IELTS score of 5

(For Master's Program)

- TOEFL ITP score of at least 480, TOEFL Internet-based score of 54, IELTS score 5 of or MU GRAD TEST score of 60.

Notes

- Only accept TOEFL ITP score from examination center arranged by Faculty of Graduate Studies, Mahidol University.
- TOEFL ITP taken from other domestic and overseas institutes are invalid.
- The test date must be within previous 2 years before application date
- Applicant who obtained a valid English score must submit an **official score certificate** along with your application. Otherwise, your English score will not be considered.
- Detail of English Competency Standard for Admission:
<http://www.grad.mahidol.ac.th/en/current-students/language-center.php>

7. Two copies of Curriculum Vitae
8. Two copies of Statement of Purposes and Career Goals
9. Two copies of Current bank statement / Scholarship letter (if any)
10. Two copies of Concept paper / research proposal (recommended for all applicants)
11. Two copies of additional documents may be requested by each program (such as letter of work experience / professional license/ related certificates and awards)

Submitting documents via online admission system.

- All documents must be in pdf format (maximum size 2 MB)
- Recent photograph must be in jpeg format only (maximum size 2 MB)

Job option after graduation

1. Computer Science Specialist in Education Places
2. Computer Scientist
3. Computer Science Researcher
4. IT Project Manager

Further information about the programme and scholarship may be obtained from the Director of Graduate Studies, Computer Science:

1. Dr. Boonsit Suthijaroen

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Program Coordinator

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Tel. : 0 2441 0909 Fax: 0 2441 0808

Note 1. For more education information: www.grad.mahidol.ac.th
: www.ict.mahidol.ac.th

**For more information please contact The Student Admission Section.
Tel . 0 2441 4125 ext. 208-210, 0 2441 9129, E-mail: gradinter@mahidol.ac.th
Faculty of ICT, Tel. 0 2354 4333, E-mail: ictadmission@mahidol.ac.th**