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Doctor of Philosophy Programme in Computer Science (International Programme)

หลักสูตร ปรัชญาดุษฎีบัณฑิต

สาขาวิชา วิทยาการคอมพิวเตอร์ (หลักสูตรนานาชาติ) (ภาคปกติ)

Faculty of Information and Communication Technology

คณะเทคโนโลยีสารสนเทศและการสื่อสาร

Expected number of students to be accepted all year round: 5 Students

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 of 3.5;
2. Submit a certificate of English proficiency with minimum admission score:
 - IELTS - at least 3 or
 - TOEFL INTERNET BASED - at least 32 or
 - TOEFL ITP (test arranged by Faculty of Graduate Study, Mahidol University) - at least 400

Important Notes:

- English proficiency score must be taken within 2 years up to the admission date.
 - Application without submitting a valid English certificate will NOT be considered.
 - MU English Competency Standards: www.grad.mahidol.ac.th
 - MU English proficiency tests, please contact the Language Center, Faculty of Graduate Studies.
Tel. 0-2441-4125 ext. 221-222
3. Exemptions from the above conditions may be granted by the Programme Committee and the Dean of the Faculty of Graduate Studies under exceptional circumstances.

Written Examination

There is NO written examination for this program. Applicants must check their eligibility for interview upon the announcing date of the interview list which is scheduled for each admission round.

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)
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5. Other Elective Courses

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

ITCS	699	Dissertation (Plan 2)	36(0-108-0)
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ITCS	898	Dissertation (Plan 1)	48(0-144-0)
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*** 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 within and outside the country to conduct high quality research and publish their work in high impact journals and conference proceedings.

Details of Scholarships

The Faculty of ICT offers a limited number of full-time conditional scholarships including tuition fees and monthly allowance of 20,000 Baht per month to outstanding students with good academic and research background.

Additional information for applicants

To be admitted to the PhD program, all applicants must pass both interview and initial research proposal presentation to the admission committee of the Faculty of ICT.

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 (if available)
3. CV or resume describing your academic and work experiences.

Application Process

Application is only available via online at www.grad.mahidol.ac.th. All necessary supporting documents must be submitted to the application system and committee before the preliminary interview can be conducted. In addition to the online application submission (required), applicants are encouraged to contact faculty members and approach to be a potential advisor and the Ph.D. program coordinator for initial contact. Please see list of faculty members and Ph.D. program coordinator at <http://www.ict.mahidol.ac.th>.

Required Documents

Applicants must upload all documents via online admission system. All documents must be in PDF format (maximum size 2 MB). Photograph must be in JPEG format

- A recent and formal photograph (1x1 inch in size)
- A copy of an applicant's degree certificate or a letter of graduation certification (for an applicant with a degree completion)
- A letter certifying that an applicant is currently in the final year prior to graduation (for an applicant seeking for a degree)
- A detailed transcript of a degree (for an applicant with a degree completion)
- An incomplete detailed transcript of a degree with course names and grades of the first to the current semester prior to graduation (for an applicant seeking for a degree)
- For Thai applicants, a copy of Thai identification card with a signature on it.
- For Foreign applicants, a valid passport showing both your photo and the expiration date
- A copy of house registration certification for Thai applicants
- A copy of Certificate of English proficiency : IELTS / TOEFL INTERNET BASED / TOEFL ITP
- A copy of proof of payment for the application fee

Job option after graduation

1. Computer Science Specialist/Instructor in academic institution
2. Computer Scientist
3. Computer Science Researcher
4. IT Project Manager
5. Software Developer

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

1. Asst. Prof. Boonsit Yimwadsana (E-mail : ictadmission@mahidol.ac.th, boonsit.yim@mahidol.ac.th)
2. Dr. Thitinan Tantidham (E-mail : ictadmission@mahidol.ac.th, thitinan.tan@mahidol.ac.th)

Program Coordinator

1. Miss. Thunyathorn Suthijaroen (E-mail : ictadmission@mahidol.ac.th, thunyathorn.sut@mahidol.ac.th)
2. Miss. Buntida Suvacharakulon (E-mail : ictadmission@mahidol.ac.th, buntida.suv@mahidol.ac.th)

Phayathai Campus

Faculty of Information and Communication Technology, Computing Center Building, Mahidol University,
Phayathai campus, Rama 6 Road, Rajathvi, Bangkok 10400

Tel. : 0 2354 4333

Fax: 0 2354 7333

Salaya Campus

Faculty of Information and Communication Technology, ICT Building, Mahidol University, 999
Phuttamonthon 4 road, Salaya, Phuttamonthon, Nakhon Pathom 73170

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: gradthai@mahidol.ac.th

Faculty of ICT, Tel. 0 2354 4333, E-mail: ictadmission@mahidol.ac.th