

M.S. CS

MASTER OF SCIENCE IN COMPUTER SCIENCE

2-YEAR PROGRAM, THESIS AND NON - THESIS OPTIONS

The Master of Science Program in Computer Science aspires to produce graduates who are capable of working efficiently in technology oriented environment. In order to meet this philosophy, the curriculum emphasizes:

- True understanding of the principles of major topics in Computer Science.
- Analytical approaches in solving problems and decision making based on technology and research methodology.
- Innovative skills to create research work that is worthy in both academic and computer applications.



Study at **Hua Mak Campus**

ADMISSION SCHEDULE 2017 / 2018

| Admission Schedule | Semester 1/2017 (August - December 2017) | Semester 2/2017 (January - May 2018) | Semester 1/2018 (August - December 2018) | Semester 2/2018 (January - May 2019) |
|-----------------------------|---|---|---|---|
| Application Filling Period | July 21, 2017 | December 16, 2017 | July 21, 2018 | December 15, 2018 |
| AU English Proficiency Test | July 22, 2017 | December 17, 2017 | July 22, 2018 | December 16, 2018 |
| Examination Interview | July 22, 2017 | December 20, 2017 | July 24, 2018 | December 18, 2018 |
| AU Entrance Results | July 24, 2017 | December 23, 2017 | July 26, 2018 | December 20, 2018 |
| Registration Period | July 26 - August 11, 2017 | January 3-13, 2018 | July 30 - August 11, 2018 | January 7-14, 2019 |
| Instruction Begins | August 7, 2017 | January 8, 2018 | August 7, 2018 | January 7, 2019 |

ADMISSION REQUIREMENTS QUALIFICATION FOR ADMISSION

The following admission requirements (recommended) for any prospective students to enter the program.

1. Bachelor's degree from an accredited institution. The applicants must graduate from the following academic fields: Computer Science, Information Technology, Telecommunications Science, Engineering or related field.
2. Three recommendation letters from lecturers or employers
3. Required GPA of at least 2.5

ENTRANCE REQUIREMENTS

1. A completed application form
2. Official transcript from the previous university attended (2 copies)
3. Bachelor's degree certificate (2 copies)
4. Citizen Identification Card and Residence Registration - For Thai Applicants (2 copies)
5. Passport - For Non-Thai Applicants (2 copies)
6. Photographs formal attire, not in graduation gown (Six, 1x1-inch size)
7. Letter of recommendation from former instructors or employers at the time of the application (3 letters)

Note: All documents must be endorsed with signature and submitted in person within the last day application period. Otherwise, the application will not be considered and the applicant will not be allowed for the Admission interview.

ADMISSION FEE

AU English Proficiency Test and Interview Baht 500
 Admission Fee Baht 500

EXEMPTION

The AU English Proficiency Test can be exempted depending on which of the following conditions you satisfy.

- a TOEFL score of (iBT) 90 or an IELTS (Academic) score of at least 6.5 (Validation: Two years)
- a Bachelor's degree or a higher degree from native English speaking countries (e.g. USA, Canada, UK, and New Zealand)

STUDY SYSTEM

1st semester August - December
 2nd semester January - May

VENUE & CLASS HOURS

» Hua Mak Campus, Ramkhamhaeng 24 Road
 Mon. - Fri. 6.30 P.M. - 9.30 P.M.
 Sat. - Sun. 9.00 A.M. - 5.00 P.M.

DURATION: 2 years

GRADUATION REQUIREMENTS

Plan A : Coursework and Thesis

- Have completed all the courses of the curriculum.
- Have obtained a cumulative grade point average of at least 3.00.
- Have passed the thesis defense.
- Have a publication or obtain an acceptance of a publication related to the content of the thesis in a journal or an international conference proceeding and which is approved by the Academic Committee of the department.*
- Have obtained library and financial clearance from the University.
- Have demonstrated good behavior and discipline.
- Have passed Research Planning and Management Seminar

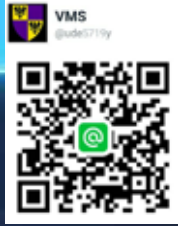
Plan B: Coursework and Independent Study

- Have completed all the courses of the curriculum.
- Have obtained a cumulative grade point average of at least 3.00.
- Have passed the comprehensive examination.
- Have passed the project presentation.
- Have obtained library and financial clearance from the University.
- Have demonstrated good behavior and discipline.
- Have passed Research Planning and Management Seminar.

Remark*: 2 publications are required for 24 credits Thesis

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STUDY PLAN

| | | | |
|--------------------------------|-------------------|--|-------------------|
| Thesis Option (Plan A1) | 12 credits | Coursework and Independent Study (Plan B) | |
| Preparatory Courses | Non-credit | Preparatory Courses | Non-credit |
| Required Courses | 9 credits | Required Courses | 9 credits |
| Elective Courses | 15 credits | Elective Courses | 24 credits |
| Thesis | 12 credits | Project | 3 credits |
| Total | 36 credits | Total | 36 credits |

| | |
|--------------------------------|-------------------|
| Thesis Option (Plan A2) | 24 credits |
| Preparatory Courses | Non-credit |
| Required Courses | 9 Credits |
| Elective Courses | 3 Credits |
| Thesis | 24 Credits |
| Total | 36 Credits |

YEAR 1

Semester 1

| | |
|---------|--|
| SC 6201 | Advanced Computing Systems |
| SC 6202 | Computability, Complexity and Algorithms |
| SC 6212 | Programming Languages and Compiler |

Semester 2

| | |
|-------------|---------------------------------------|
| Plan A1, A2 | Three Elective Courses |
| Plan A2 | One Elective Courses + SC 7000 Thesis |

YEAR 2

Semester 1

| | |
|---------|---------------------------------------|
| Plan A1 | Two Elective Courses + SC 7000 Thesis |
| Plan A2 | SC 7000 Thesis |
| Plan B | Three Elective Courses |

Semester 2

| | |
|-------------|--|
| Plan A1, A2 | SC 7000 Thesis |
| Plan B | Two Elective Courses + SC6900 Master Project + Comprehensive Examination |

CURRICULUM

Preparatory Courses

| | |
|---------|---------------------------------------|
| ES 5001 | English for Graduate Study |
| SC 5211 | Computer Programming & Data Structure |

Required Courses

| | |
|---------|--|
| SC 6201 | Advanced Computing Systems |
| SC 6202 | Computability, Complexity and Algorithms |
| SC 6212 | Programming Languages and Compiler |

ELECTIVE COURSES

| | |
|---------|---|
| SC 6319 | Computer Network and Internet Security |
| SC 6324 | Principles of Software Engineering |
| SC 6360 | Artificial Intelligence |
| SC 6362 | Data Mining |
| SC 6365 | Natural Language Understanding and Processing |
| SC 6399 | Graduate Seminar in Computer Science |
| SC 6601 | Cloud Computing and Big Data |
| SC 6602 | Data Analysis and Visualization |
| SC 6603 | Data Warehousing and Business Intelligences |
| SC 6604 | Database Management Systems |
| SC 6610 | Pattern Recognition and Machine Learning |
| SC 6611 | Neural Networks and Deep Learning |
| SC 6612 | Blockchain Technology and Cryptocurrency |

| | |
|-------------|---|
| SC 6613 | Recommender Systems |
| SC 6620 | Computer Graphics |
| SC 6621 | Computer Vision |
| SC 6622 | Augmented and Virtual Environments |
| SC 6630 | User Interface and User Experience (UI/UX) |
| SC 6631 | Web Technology, Applications and Security |
| SC 6632 | Mobile Computing |
| SC 6640 | Principles of the Theory of Computation |
| SC 6633 | Ubiquitous Computing and Internet of Things (IoT) |
| SC 6400-99 | Selected Topics in Computer Science |
| SC 6500-99 | Directed Individual Study in Computer Science |
| SC 8311 | Parallel Algorithms |
| SC 8322 | Image Processing |
| SC 8323 | Computational Models of Decision Making |
| SC 8324 | Natural Language Processing |
| SC 8350 | Computer and Data Security |
| SC 8354 | Advanced Computer Communications |
| SC 8380-599 | Advanced Topics in Computer Science |

Independent study

| | |
|--------|----------------|
| SC6900 | Master Project |
|--------|----------------|

Thesis

| | |
|--------|--------|
| SC7000 | Thesis |
|--------|--------|

ESTIMATED FEES

Fee Description

| | 2-Years (4 Semesters) | |
|---------------------------------------|-----------------------|------|
| Enrollment Fees: | THB | US\$ |
| Matriculation Fee (Thai Students) | 10,000 | 303 |
| Matriculation Fee (non-Thai Students) | 22,500 | 681 |
| Student's Activity Fee | 7,000 | 213 |

Registration Fees

| | | |
|--|---------|-------|
| Tuition Fee (THB 4,000 x 37 credits) | 148,000 | 4,485 |
| University Fee (THB 17,900 x 4 Semesters) | 71,600 | 2,170 |
| Annual Internet & Access Control Fee (THB 2,400/Year) | 4,800 | 146 |
| Annual Health & Life Insurance Fee (non-Thai Students, THB 5,000/Year) | 10,000 | 303 |

| | | |
|--|----------------|--------------|
| Approximate Total for Thai Students | 241,400 | 7,315 |
| Approximate Total for non-Thai Students | 263,900 | 7,997 |

Note:

- Tuition fee doesn't cover the followings:
 - Admission fee
 - Text books
 - AU Academic Writing Course (15,000 THB)
 - Tuition fee for non-credit courses
 - Thesis Final Defense/Comprehensive Examination
- The fees are subject to change at the university's discretion without prior notice.
- Currency exchange rate: US \$1 = THB 33

IMPORTANT

The provisional information statements set forth in this catalog should not be construed as the basis of any contract between a student and this institution. As such Assumption University reserves the right to change any provision listed in this catalog, including, but not limited to academic requirements for graduation. Every effort through the Office of Graduate Studies, will be made to keep students advised of any such changes.

The University Registrar

Last updated: May 2018

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