**Master of Engineering and Master of Science Program in Computer Engineering (International Program)**

M.Eng. (Computer Engineering) M.Sc. (Computer Engineering)

**Philosophy:**

This program aims at producing engineers who are knowledgeable and skillful in thinking, designing, applying, solving problems and keeping abreast with new technologies. The graduates can be autonomous and life-long learners who are experts in research and development to develop new technologies together with responsibilities and ethics.

**Objectives:**

1. To produce graduates who are excellent in computer engineering.
2. To produce graduates who are proficient in English.
3. To train graduates to be experts in research, analysis and effectively solving technical problems.
4. To promote research and development and transfer appropriate technology from abroad to move Thailand towards a sufficient economy.
5. To produce graduates who can create innovative media; therefore, they can disseminate knowledge to the general public.
6. To produce graduates with responsibility and professional ethics.

**Qualifications of a prospective candidate:**

1. Has a bachelor's degree in engineering, science, applied science, industrial education or related fields
2. Holds a TOEFL score (paper-based) of 500, or any other English proficiency test equal to a 500 TOEFL score, or pass the exam organized by KMUTT with a score equal to a TOEFL score of 500.
   1. If the applicant does not have a TOEFL score of 500, he/she has to submit a TOEFL score of 500 or any other English proficiency test equal to a TOEFL score of 500 within one year.
   2. Has other qualifications according to KMUTT regulations for postgraduate study and approved by the program committee.

**Professions after graduation:**

1. Computer engineers
2. Computer system analyst and designers
3. Managers of computer program

**Curriculum**

| | | |
|---|---|---|
| Total Program Credits | 39 Credits | |

**Curriculum Components**

| | | |
|---|---|---|
| Plan 1.2 Dissertation | 12 Credits | |
| Major Course | | 12 Credits |
| Elective Course | | 15 Credits |
| Dissertation | | 12 Credits |

| Plan 2.1 Independent Study | 6 Credits | |
|---|---|---|
| Major Course | | 12 Credits |
| Elective Course | | 21 Credits |
| Special Project Study | | 6 Credits |
| Plan 2.2 Independent Study | 6 Credits | |
| Major Course | | 12 Credits |
| Elective Course | | 21 Credits |
| Independent Study | | 6 Credits |

## COURSE STRUCTURE

Plan 1.2 (Dissertation12 Credits)

**First Year**

| **First Semester** | **Credits** |
|---|---|
| CPE 605 Mathematical Modeling in Computer Engineering | 3(3-0-9) |
| CPE 6XX Computer Engineering Major 1 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 1 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 2 | 3(3-0-9) |
| Total | 12(12-0-36) |

**First Year**

| **Second Semester** | **Credits** |
|---|---|
| CPE 601 Technical Research Writing | 3(3-0-9) |
| CPE 6XX Computer Engineering Major 2 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 3 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 4 | 3(3-0-9) |
| Total | 12(12-0-36) |

**Second Year**

| **First Semester** | **Credits** |
|---|---|
| CPE 6XX Computer Engineering Elective 5 | 3(3-0-9) |
| CPE 700 Thesis | 6(0-12-24) |
| Total | 9(3-12-33) |

**Second Year**

| **Second Semester** | **Credits** |
|---|---|
| CPE 700 Thesis | 6(0-12-24) |
| Total | 6(0-12-24) |

**Plan 2.1  (Independent Study6 Credits : Special Project Study)**

**First Year**

| First Semester | Credits |
| --- | --- |
| CPE 605 Mathematical Modeling in Computer Engineering | 3(3-0-9) |
| CPE 6XX 6XX Computer Engineering Major 1 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 1 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 2 | 3(3-0-9) |
| Total | 12(12-0-36) |

**First Year**

| Second Semester | Credits |
| --- | --- |
| CPE 601 Technical Research Writing | 3(3-0-9) |
| CPE 6XX Computer Engineering Major 2 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 3 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 4 | 3(3-0-9) |
| Total | 12(12-0-36) |

**Second Year**

| First Semester | Credits |
| --- | --- |
| CPE 6XX Computer Engineering Elective 5 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 6 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 7 | 3(3-0-9) |
| CPE 702 Special Project Study | 3(0-6-12) |
| Total | 12(9-6-39) |

**Second Year**

| Second Semester | Credits |
| --- | --- |
| CPE 702 Special Project Study | 3(0-6-12) |
| Total | 3(0-6-12) |

**Plan 2.2  (Independent Study Credits : (Independent Study)**

**First Year**

| First Semester | Credits |
| --- | --- |
| CPE 605 Mathematical Modeling in Computer Engineering | 3(3-0-9) |

| | |
|---|---|
| CPE 6XX Computer Engineering Major 1 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 1 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 2 | 3(3-0-9) |
| Total | 12(12-0-36) |

**First Year**

| **Second Semester** | **Credits** |
|---|---|
| CPE 601 Technical Research Writing | 3(3-0-9) |
| CPE 6XX Computer Engineering Major 2 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 3 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 4 | 3(3-0-9) |
| Total | 12(12-0-36) |

**Second Year**

| **First Semester** | **Credits** |
|---|---|
| CPE 6XX Computer Engineering Elective 5 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 6 | 3(3-0-9) |
| CPE 6XX Computer Engineering Elective 7 | 3(3-0-9) |
| CPE 703 Independent Study | 3(0-6-12) |
| Total | 12(12-0-36) |

**Second Year**

| **Second Semester** | **Credits** |
|---|---|
| CPE 703 Independent Study | 3(0-6-12) |
| Total | 3(0-6-12) |