

# MASTER OF PHILOSOPHY

## FIELD OF RESEARCH: CHEMICAL ENGINEERING

### PROGRAMME SPECIFICATIONS

The Master of Philosophy Field of Research: Chemical Engineering (MKKK) is offered on a full-time basis. The duration of study is in between minimum of one (1) year to a maximum of four (4) years.

The assessment of the research program is based on the progress report, supervisor's evaluation, research proposal and viva.

#### General Information

| 1. Awarding Institution                                 | Universiti Teknologi Malaysia                                   |     |                      |
|---|---|-----|----------------------|
| 2. Teaching Institution                                 | Universiti Teknologi Malaysia                                   |     |                      |
| 3. Programme Name                                       | Master of Philosophy  |     |                      |
| 4. Final Award  | Master of Philosophy<br>Field of research: Chemical Engineering |     |                      |
| 5. Programme Code                                       | MKKK  |     |                      |
| 6. Professional or Statutory Body of Accreditation      | MQA   |     |                      |
| 7. Language(s) of Instruction                           | English   |     |                      |
| 8. Mode of Study (Conventional, distance learning, etc) | Research  |     |                      |
| 9. Mode of operation (Franchise, self-govern, etc)      | Self-governing  |     |                      |
| 10. Study Scheme (Full Time/Part Time)                  | Full Time   |     |                      |
| 11. Study Duration                                      | Minimum : 1 year<br>Maximum : 4 years                           |     |                      |
| Type of Semester  | No. of Semesters  |     | No of Weeks/Semester |
|   | Min   | Max |                      |
| Normal  | 2   | 8   | 14                   |
| <b>Short</b>  | -   | -   | -                    |

### Course Classification

| No   | Classification                 | Credit Hours | Percentage |
|------|--------------------------------|--------------|------------|
| i.   | University Elective (1 course) | 3            |            |
| ii.  | Research Methodology           | HW           |            |
| iii. | Research (Minimum 2 semesters) | 0            |            |
| iv   | Thesis                         | 0            |            |
|      | <b>Total</b>                   | <b>3</b>     |            |

### Programme Educational Objectives (PEO)

PEO1: Graduate become the expertise in chemical industry decipline and contribute to national development.

PEO2: Graduate become a creative, innovative and adaptable senior engineer in their organization and society.

PEO3: Graduate contribute toward the environmental well-being and sustainable development.

PEO4: Graduate able to conduct research to add value to existing products.

### Programme Learning Outcomes (PLO)

PLO1: Ability to master the knowledge in chemical engineering discipline

PLO2: Ability to apply research skills in chemical engineering discipline.

PLO3: Ability to demonstrate effective communication skills in both written and oral form to report the scientific and technical facts.

PLO4: Ability to conduct professional ethics in research with minimal supervision and adhere to legal, ethical and professional code of practice.

PLO5: Ability to demonstrate leadership qualities and working effectively with peers and stakeholders.

PLO6: Ability to analyze problems in chemical engineering field using scientific and critical thinking approaches.

PLO7: Ability to manage information for lifelong learning and identify business opportunity in chemical engineering field.

## GRADUATION CHECKLIST

To graduate, students must pass all the stated courses and assessment in this checklist. It is the responsibility of the students to ensure that all courses and assessment are taken and passed. Students who do not complete any of the assessment are not allowed to graduate.

| NO.  | CODE      | COURSE  | CREDIT EARNED (JKD) | CREDIT COUNTED (JKK) | TICK (√) IF PASSED |
|--|-----------|---|---------------------|----------------------|--------------------|
| <b>SCHOOL OF CHEMICAL &amp; ENERGY ENGINEERING COURSES</b> |           |   |                     |                      |                    |
| 1  | UXXX XXX3 | University Elective (1 course)  |                     |                      |                    |
| 2  | UKKP 0010 | Research Methodology  |                     |                      |                    |
| 3  | MKKK XX00 | Research (Minimum 2 semesters)  |                     |                      |                    |
| 4  |           | Thesis  |                     |                      |                    |
| 5  |           | Publication (minimum one (1) publication from journal article or conference proceeding or book chapter) |                     |                      |                    |