

## **Course Deatail** **Master of Chemistry**

<b>Course Title:</b>	Master of Chemistry
<b>Master Degree:</b>	Master of Science (Chemistry)
<b>Academic Institution:</b>	Faculty of Science, Mahidol University
<b>Duration:</b>	2 years (August 2024 - July 2026)

### **Background and Rationale:**

The COVID-19 crisis has shown a big impact on the global economy, and it speeds up the disruptive technology for future productions. Together with an increasing influence of climate change, which constantly changes the landscape of natural resources and social challenges, contemporary chemistry education clearly needs an update in a timely manner.

The M.Sc. Program in Chemistry just completed its tenth year after its first use in 2013. The program is designed to not only cultivate students with in-depth knowledge in chemistry and related disciplines, but it also prepares them with skills and perspectives that bode well for their future career in a changing world.

### **Objectives**

By the end of the study, students are able to

1. Graduates have good moral understanding and conform to scientific ethics and social responsibility.
2. Graduates possess adequate knowledge in chemistry.
3. Graduates show analysis and synthesis thinking and are able to solve problems, propose a solution, and create innovation in chemistry.
4. Graduates show good human relations, leadership, and responsibility.
5. Graduates attain analytical, communication, and information technology skills.

### **Course Synopsis and Methodology:**

The core belief of this program is to provide our students with an education of high quality, on par with international standards. Both advanced principles in organic chemistry, analytical chemistry, inorganic chemistry, physical chemistry and chemical physics, chemistry for natural resources and waste, and catalysis science and technology as well as general skills are all an integral part of the teaching to instill professional capability, personal quality, and long-life learning that are competitive in the employment market and the society at large. Ethics and moral standard are also incorporated in the teaching to ensure that our graduates can fulfill Mahidol University's philosophical view of higher education, namely, "True success is not in the learning, but in its application to the benefit of mankind."

### **Course Content**

#### **First Semester**

- Frontiers in Chemistry
- Chemical Safety and Risk Management
- Scientific Communications
- State-of-the-Art of Instrumentation
- Research Project Development I
- Elective Courses
- Thesis

#### **Second Semester**

- Seminar in Chemistry
- Business Models in Chemical Industries
- Research Progress in Chemistry
- Thesis
- Elective Courses
- Thesis

### Graduation Conditions:

Requirement	Plan A2
Time of study	The duration of study shall not exceed the study plan
Credit requirement	At least 24 credits of courses and 12 credits of thesis
GPA requirement	At least 3.00 upon completion of all courses
English proficiency	As required by the Faculty of Graduate Studies
Soft skills	Fulfill soft skill training in each of the following areas: language and communication, leadership, research, and information technology
Thesis examination	Pass proposal, open thesis defense
Publication from thesis work	At least 1 scientific conference proceeding

### Applicant Qualifications

1. Obtained B.Sc. in chemistry or related fields from academic institutions recognized and attested by the Office of the Higher Education Commission; for Plan A2: Obtained a minimum GPA of 2.50;
2. Obtained an English Proficiency Examination score as required by the Faculty of Graduate Studies;

### Document Required

- TIPP application form (Download at: <https://tica-thaigov.mfa.go.th/en/page/75500-tipp-application-form?menu=605b13dbb6f1b76ed31778b3>)
- Medical Report (If candidates had submitted other health certificates without the TICA medical report form, their application will not be accepted for consideration)
- Transcript of Bachelor's degree (to show the courses that you have learnt throughout Bachelor's degree)
- Certificate of Bachelor's degree
- English test score (IELTS 6, or TOEFL (IBT 6.5) , (PBT 400), International program within 2 years)
- Recommendation Letter (At least 3 people)

### Contact:

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\*\*\*The application procedure will complete when TICA has received the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible countries/territories.