

The program aims at producing educational personnel with fundamental knowledge in chemistry to have knowledge and expertise in various branches of chemistry and to have in-depth knowledge and skills in conducting research. They should be able to research for new bodies of knowledge or innovations and be able to apply the knowledge for academic, societal and national development.

Applicant Qualifications

1. A candidate must hold a master's degree in the field of physical chemistry, analytical chemistry, organic chemistry or equivalent, with a GPA of not less than 3.5, or
2. Depending on the consideration of the program committee or
3. A candidate must hold a bachelor's degree with at least second-class honors in chemistry or related fields.

Professions after Graduation

1. Teacher, lecturer, academic, researcher and scientist in government agencies and private educational institutions
2. Academic, researcher and scientist in the departments of state enterprises such as the Institute of Scientific and Technological Research of Thailand, Excise Department, Petroleum Authority of Thailand Electricity Generating Authority of Thailand, etc.
3. Academic, researcher, scientist and consultant in business and industrial sector

Curriculum

Plan 2.1 for student with Master degree	48 Credits
Plan 2.2 for student with Bachelor degree	72 Credits

Curriculum Components

Plan 2.1 for student with Master degree

● Compulsory Course	1	Credits
● Major Course	-	Credits
● Selective Course	11	Credits
● Dissertation	36	Credits

Plan 2.2 for student with Master degree

● Compulsory Course	5	Credits
● Major Course	9	Credits
● Elective Course	10	Credits

- Dissertation 48 Credits

COURSE STRUCTURE

Plan 2.1 for student with Master degree

Major: Physical chemistry

First Year

First Semester

	Credits
CHM xxx Elective	2 (2-0-6)
CHM xxx Elective	3 (3-0-9)
CHM xxx Elective	3 (3-0-9)
Total	8 (8-0-24)

Second Semester

	Credits
CHM xxx Elective	3 (3-0-9)
CHM 798 Dissertation	7 (0-14-28)
Total	10 (3-14-37)

Second Year

First Semester

	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)

Second Semester

	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)

Third Year

First Semester

	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)

Second Semester

	Credits
CHM 797 Seminar III	1 (0-2-3)
CHM 798 Dissertation	2 (0-4-8)
Total	3 (0-6-11)

Major: Chemical Analysis

First Year

First Semester

	Credits
CHM xxx Elective	2 (2-0-6)
CHM xxx Elective	3 (3-0-9)
CHM xxx Elective	3 (3-0-9)
Total	8 (8-0-24)

Second Semester

	Credits
CHM xxx Elective	3 (3-0-9)
CHM 798 Dissertation	7 (0-14-28)
Total	10 (3-14-37)

Second Year

First Semester

	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)

Second Semester

	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)

Third Year

First Semester

	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)

Second Semester

	Credits
CHM 797 Seminar III	1 (0-2-3)
CHM 798 Dissertation	2 (0-4-8)
Total	3 (0-6-11)

Major: Organic Chemistry

First Year

First Semester

	Credits
CHM xxx Elective	2 (2-0-6)
CHM xxx Elective	3 (3-0-9)
CHM xxx Elective	3 (3-0-9)
Total	8 (8-0-24)

Doctor of Philosophy Program in Chemistry

Second Semester	Credits
CHM xxx Elective	3 (3-0-9)
CHM 798 Dissertation	7 (0-14-28)
Total	10 (3-14-37)
Second Year	
First Semester	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)
Second Semester	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)
Third Year	
First Semester	Credits
CHM 798 Dissertation	9 (0-18-36)
Total	9 (0-18-36)
Second Semester	Credits
CHM 797 Seminar III	1 (0-2-3)
CHM 798 Dissertation	2 (0-4-8)
Total	3 (0-6-11)

Plan 2.2 for student with Bachelor degree

Major: Physical chemistry

First Year	
First Semester	Credits
CHM 641 Quantum Chemistry and Spectroscopy	3 (3-0-9)
CHM 642 Mathematical Methods and Statistical Thermodynamics	3 (3-0-9)
CHM 643 Chemistry of Solution and Chemistry of Surface and Colloids	3 (3-0-9)
Total	9 (9-0-27)
Second Semester	Credits
CHM 601 Research Methodology	2 (2-0-6)
CHM 697 Seminar I	1 (0-2-3)
CHM xxx Elective	3 (3-0-9)
Total	6 (6-2-18)

Second Year

First Semester

CHM xxx Elective	Credits
	2 (2-0-6)
CHM 799 Dissertation	6 (0-12-24)
Total	8 (2-12-30)

Second Semester

CHM 698 Seminar II)	Credits
	1 (0-2-3) (
CHM xxx Elective	2 (2-0-6)
CHM 799 Dissertation	6 (0-12-24)
Total	9 (2-14-33)

Third Year

First Semester

CHM xxx Elective	Credits
	3 (3-0-9)
CHM 799 Dissertation	6 (0-12-24)
Total	9 (3-12-33)

Second Semester

CHM 797 Seminar III	Credits
	1 (0-2-3) ()
CHM 799 Dissertation	6 (0-12-24)
Total	7 (0-14-27)

Forth Year

First Semester

CHM 799 Dissertation	Credits
	6 (0-12-24)
Total	6 (0-12-24)

Second Semester

CHM 799 Dissertation	Credits
	6 (0-12-24)
Total	6 (0-12-24)

Fifth Year

First Semester

CHM 799 Dissertation	Credits
	6 (0-12-24)
Total	6 (0-12-24)

Second Semester

CHM 799 Dissertation	Credits
	6 (0-12-24)
Total	6 (0-12-24)

Major: Chemical Analysis

First Year

First Semester

	Credits
CHM 621 Separation Techniques	3 (3-0-9)
CHM 622 Electrochemical Analytical Techniques	3 (3-0-9)
CHM 623 Analytical Spectroscopy	3 (3-0-9)
Total	9 (9-0-27)

Second Semester

	Credits
CHM 601 Research Methodology	2 (2-0-6)
CHM 697 Seminar I	1 (0-2-3)
CHM xxx Elective	3 (3-0-9)
Total	6 (6-2-18)

Second Year

First Semester

	Credits
CHM xxx Elective	2 (2-0-6)
CHM 799 Dissertation	6 (0-12-24)
Total	8 (2-12-30)

Second Semester

	Credits
CHM 698 Seminar II)	1 (0-2-3)
CHM xxx Elective	2 (2-0-6)
CHM 799 Dissertation	6 (0-12-24)
Total	9 (2-14-33)

Third Year

First Semester

	Credits
CHM xxx Elective	3 (3-0-9)
CHM 799 Dissertation	6 (0-12-24)
Total	9 (3-12-33)

Second Semester

	Credits
CHM 797 Seminar III	1 (0-2-3) ()
CHM 799 Dissertation	6 (0-12-24)
Total	7 (0-14-27)

Forth Year

First Semester

	Credits
CHM 799 Dissertation	6 (0-12-24)

Doctor of Philosophy Program in Chemistry

Total	6 (0-12-24)
Second Semester	Credits
CHM 799 Dissertation	6 (0-12-24)
Total	6 (0-12-24)
Fifth Year	
First Semester	Credits
CHM 799 Dissertation	6 (0-12-24)
Total	6 (0-12-24)
Second Semester	Credits
CHM 799 Dissertation	6 (0-12-24)
Total	6 (0-12-24)

Major: Organic Chemistry

First Year	
First Semester	Credits
CHM 611 Advanced Organic Chemistry	3 (3-0-9)
CHM 612 Advanced Organic Synthesis	3 (3-0-9)
CHM 613 Structure Determination of Organic Compounds	3 (3-0-9)
Total	9 (9-0-27)
Second Semester	Credits
CHM 601 Research Methodology	2 (2-0-6)
CHM 697 Seminar I	1 (0-2-3)
CHM xxx Elective	3 (3-0-9)
Total	6 (6-2-18)
Second Year	
First Semester	Credits
CHM xxx Elective	2 (2-0-6)
CHM 799 Dissertation	6 (0-12-24)
Total	8 (2-12-30)
Second Semester	Credits
CHM 698 Seminar II)	1 (0-2-3)
CHM xxx Elective	2 (2-0-6)
CHM 799 Dissertation	6 (0-12-24)
Total	9 (2-14-33)

Third Year

First Semester

CHM xxx Elective

CHM 799 Dissertation

Total

Credits

3 (3-0-9)

6 (0-12-24)

9 (3-12-33)

Second Semester

CHM 797 Seminar III

CHM 799 Dissertation

Total

Credits

1 (0-2-3) ()

6 (0-12-24)

7 (0-14-27)

Forth Year

First Semester

CHM 799 Dissertation

Total

Credits

6 (0-12-24)

6 (0-12-24)

Second Semester

CHM 799 Dissertation

Total

Credits

6 (0-12-24)

6 (0-12-24)

Fifth Year

First Semester

CHM 799 Dissertation

Total

Credits

6 (0-12-24)

6 (0-12-24)

Second Semester

CHM 799 Dissertation

Total

Credits

6 (0-12-24)

6 (0-12-24)