

PROGRAM STRUCTURE

LEVEL : Graduate
SCHOOL : School of Science
PROGRAM : 607110221 : Doctor of Philosophy Program in Applied Chemistry (Plan 2.1)
PROGRAM YEAR : 2560

PHILOSOPHY

This programme aims at creating PhD holders with advanced knowledge of and expertise in theoretical and practical applied chemistry, with the ability to integrate and apply their knowledge of chemistry, natural products, science, polymer technology and analytical chemistry to conducting research or creating innovations. The programme's graduates are expected to be leaders for change in the field of chemistry and to abide by integrity and ethical principles, capable of constantly formulating up-to-date bodies of knowledge that contributes to social development.

PURPOSE

1. Knowledge of and skills in integrative research methodology to build new bodies of knowledge or innovations related to applied chemistry and to disseminate their research findings at international levels;
2. Skills in developing chemistry-related knowledge to keep abreast with the currently changing situations;
3. Ability to induce change in the fields of chemistry and applied chemistry;
4. Potential for being morality-abiding independent entrepreneurs; and
5. Ability to use English for international communication.

1 Required Course **MINIMUM CREDIT** : 6

Course Code	COURSE	CREDIT
<u>1102702</u>	Ethics and Research Methodology	3 (3-0-6)
<u>1102986</u>	Doctoral Seminar 1 E2: 1102784 Master Seminar 1 1 (0-3-1)	1 (0-3-1)
<u>1102987</u>	Doctoral Seminar 2 E2: 1102882 Master Seminar 2 1 (0-3-1)	1 (0-3-1)
<u>1102988</u>	Doctoral Seminar 3	1 (0-3-1)

2 Elective Course MINIMUM CREDIT : 6

Course Code	COURSE	CREDIT
<u>1102721</u>	Drug Discovery Based on Natural Products	3 (3-0-6)
<u>1102722</u>	Bioassay Methods	3 (2-3-5)
<u>1102723</u>	Natural Products in Nutraceuticals, Cosmeceuticals and Agrochemicals	3 (3-0-6)
<u>1102724</u>	Structural Characterization of Organic Compounds	3 (3-0-6)
<u>1102725</u>	Advanced Organic Chemistry	3 (3-0-6)
<u>1102726</u>	Chemistry of Dyes	3 (2-3-5)
<u>1102727</u>	Enzyme Catalysis in Organic Synthesis	3 (2-3-5)
<u>1102728</u>	Structural Design of Polymers	3 (3-0-6)
<u>1102729</u>	Polymer Applications	3 (3-0-6)
<u>1102730</u>	Advanced Organic Chemistry	3 (3-0-6)
<u>1102736</u>	Analysis and Characterization of Polymers	3 (2-3-5)
<u>1102737</u>	Property Improvement in Polymers	3 (3-0-6)
<u>1102738</u>	Electrochemical Analysis	3 (3-0-6)
<u>1102739</u>	Chromatography	3 (2-3-5)
<u>1102740</u>	Advanced Inorganic Chemistry	3 (3-0-6)
<u>1102741</u>	Green Chemistry	3 (3-0-6)
<u>1102742</u>	Advanced Analytical Chemistry	3 (3-0-6)
<u>1102743</u>	Agricultural and Environmental Chemical Analysis	3 (3-0-6)
<u>1102744</u>	Analytical Techniques for Pharmaceutical and Medical Sciences	3 (3-0-6)
<u>1102745</u>	Surface Chemistry	3 (3-0-6)
<u>1102746</u>	Advanced Physical Chemistry	3 (3-0-6)
<u>1102747</u>	Bioinorganic Chemistry	3 (3-0-6)
<u>1102748</u>	Selected Topics in Applied Chemistry	3 (3-0-6)

3 Dissertation MINIMUM CREDIT : 36

Course Code	COURSE	CREDIT
<u>1102995</u>	Dissertation	36 (0-108-9)

REMARKS

P : Prerequisite Course

E1 : One-way Equivalent

E2 : Two-way Equivalent

รายวิชา 1006393 Principles of Translation 3(3-0-6) ในกรณีที่นักศึกษาไม่สามารถใช้ภาษาไทยได้ ให้เรียนรายวิชา 1006382 Directed Studies แทน

รายวิชา 1006397 Comparative Study of English and Thai 3(3-0-6) ในกรณีที่นักศึกษาไม่สามารถใช้ภาษาไทยได้ ให้เรียนรายวิชา 1006381 Selected Reading แทน