

Program Specification
Master of Science in Pharmacy Program
in Clinical Pharmacy (International Program)
(Academic Year of 2016-2020)

Program Title:	Master of Science in Pharmacy Program in Clinical Pharmacy (International Program)
Name of Degree:	Master of Science in Pharmacy (Clinical Pharmacy) M.Sc. in Pharm. (Clinical Pharmacy)
Awarding Institution:	Faculty of Graduate Studies, Mahidol University
Teaching Institution:	Department of Pharmacy, Faculty of Pharmacy, Mahidol University
Accreditation body:	Approved by Mahidol University's Council
Acknowledge by:	The Office of the Higher Education Commission's which was reorganized to Minister of Higher Education, Science, Research and Innovation (inaugurated in May 2019)

Philosophy and Objectives of the Program

Philosophy of the Program

The program uses the same education philosophy of the University which currently is "Learning Center Education, Outcome-based Education, Constructivism". The program aims to produce graduates who are competent clinical pharmacists equipped with knowledge in pharmacotherapy, clinical pharmacy practice skills and ability to conduct clinical pharmacy related research that meets international standard with research ethics and morality in concordance to the code of conduct of pharmacy profession.

Expected Learning Outcomes

(Program Learning Outcomes 2019; implemented 2019-2020)

On successful completion of the program students will be able to:

1. Apply knowledge on characteristics of diseases and pharmacotherapy principle.
2. Inter-relate pharmacotherapy principles to practice.
3. Analyze drug-related problems or disease problems, develop solutions and justify professional decisions.
4. Demonstrate moral, ethics and professional ethics in accordance to social norm and professional standard along with personal accountability in executing professional decisions, leadership, communication and application of knowledge and skills.

5. Appraise and critically evaluate published information and present it in written or oral format using appropriate information technology technique.
6. Conduct clinical pharmacy research.

Admission Requirements

1. Candidates must hold a Bachelor's degree in Pharmacy and meet the requirements set by the Faculty of Graduate Studies.
2. Candidates must have a minimum grade point average of 2.50.
3. For Clinical Pharmacy course, candidate must obtain Pharmacy Council of Thailand or other Pharmacy License that the Programme Committee considers as equivalent.

Selection Methods

Candidates are selected based on academic/research credentials and/or written examination and interview according to the rules and regulation of the Faculty of Graduate Studies, Mahidol University.

Academic System

Semester system 2 semesters per academic year

Credits assignments

The number of credits assigned to each subject is determined as follows:

1. Lecture or discussion consuming 15 hours per semester is equal to 1 credit hour.
2. Laboratory or practice consuming 30 hours per semester is equal to 1 credit hour.
3. Thesis/dissertation consuming 45 hours per semester is equal to 1 credit hour.

Registration Must enroll as a full-time student.

Instructing Language English

Program Structure

Credit Requirements

Credit requirements of the program were set according to the Ministry of Education Announcement titled "Standard Criteria for Graduate Studies 2005," with specified plan 2 curriculum.

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|--------------------------------|-------------------|
| 1. Required Courses | 18 credits |
| 2. Elective Courses (at least) | 6 credits |
| 3. Thesis | 12 credits |
| Total no less than | 36 credits |

Required Courses

<u>Course ID</u>	<u>Course Name</u>	<u>Credit(s)</u>
PYID 685	Research Methodology in Pharmacy I	2 (2-0-4)
PYCP 648	Seminar in Clinical Pharmacy I	1 (1-0-2)
PYCP 649	Seminar in Clinical Pharmacy II	1 (1-0-2)
PYCP 666	Pharmaceutical Care I	3 (3-0-6)
PYCP 668	Clinical Pharmacy and Clerkship I	3 (2-3-5)
PYCP 670	Special Problems in Clinical Pharmacy	2 (0-6-2)
PYCP 667	Pharmaceutical Care II	3 (3-0-6)
PYCP 669	Clinical Pharmacy and Clerkship II	3 (2-3-5)

Elective Courses

Elective courses can be any graduate-level courses offered within Mahidol University or other universities with approval from the program director, major advisor, or program administrative committee. Listed below are examples of elective courses offered by the Faculty of Pharmacy, Mahidol University.

<u>Course ID</u>	<u>Course Name</u>	<u>Credit(s)</u>
GRID 603	Biostatistics	3 (3-0-6)
PYCP 627	Therapeutic Drug Monitoring	3 (3-0-6)
PYPY 644	Drug Information Service	3 (3-0-6)
PYPY 623	Drug Use Evaluation	3 (3-0-6)
PYPY 645	Intravenous Drug and Nutrient Admixture	3 (3-0-6)

Thesis

<u>Course ID</u>	<u>Course Name</u>	<u>Credit(s)</u>
PYID 698	Thesis	12 (0-36-0)

Study Plan

Year	Semester 1			Semester 2		
1	PYCP 666	Pharmaceutical Care I	3(3-0-6)	PYCP 668	Clinical Pharmacy and Clerkship I	3(2-3-5)
	PYCP 667	Pharmaceutical Care II	3(3-0-6)	PYCP 669	Clinical Pharmacy and Clerkship II	3(2-3-5)
	PYID 685	Research Methodology in Pharmacy I	2(2-0-4)	PYCP 648	Seminar in Clinical Pharmacy I	1(1-0-2)
				PYCP 670	Special Problems in Clinical Pharmacy	2(0-6-2)
		Elective Courses	3 credits		Elective Courses	3 credits
		Total	11 credits		Total	12 credits
2	PYCP 649	Seminar in Clinical Pharmacy II	1(1-0-2)	PYID 698	Thesis (continued)	6(0-18-0)
	PYID 698	Thesis	6(0-18-0)			
		Total	7 credits		Total	6 credits

Thesis Proposal Presentation

In the second year of study, students must submit a document to FGS for appointment of Thesis Proposal Committee consisting of at least 2 faculty members, one of which is student's major advisor while another one (or more) can be any academic staff either within or outside Mahidol University. After approval of thesis research proposal, this same committee will serve as Thesis Advisory Committee by monitoring and providing guidance to student regarding his/her master's research.

Thesis Defense

Upon completion of master's research and thesis writing along with approval from Thesis Advisory Committee, students must submit a document to FGS for appointment of Thesis Defense Committee consisting of at least 3 members: a committee chair (an external examiner) and the Thesis Advisory Committee (at least 2 members). After passing the oral thesis defense, students can submit final thesis to FGS.

Evaluation and Graduation Requirements

Evaluation

Student evaluation is in accordance with the rules and regulations of FGS. (See details at <https://graduate.mahidol.ac.th/inter/current-students/?g=11>).

Graduation Requirements

To graduate all students must:

1. obtain a cumulative GPA of at least 3.00.
2. pass the English Proficiency Examination offered by the Faculty of Graduate Studies, Mahidol University or equivalent.
3. present thesis and pass the oral thesis examination according to the regulations of Faculty of Graduate Studies, Mahidol University.
4. publish at least 1 article. There are 2 ways to publish the thesis or part of the thesis in the Master's degree program.

4.1 Publish the thesis or part of the thesis in a journal or an academic printed matter that must be accepted in a student's field of study and has an editorial review or a peer review as an article assessment system or;

4.2 Present the thesis or part of the thesis at an academic conference that has a peer review and publishes the full paper in the proceedings.

Types of journal or printed matter and academic conference set by the Faculty of Graduate Studies. in an international peer review journal that is listed by the Faculty of Graduate Studies, Mahidol University.

Students Job Opportunities

The job opportunities of the Master of Science in Pharmacy Program in Clinical Pharmacy graduates are diverse. These may include a faculty member in a clinical pharmacy department/division, a clinical pharmacy specialist in hospital settings or drugstore, a government official in a food and drug administration or other related departments, a pharmaceutical liaison or a researcher in pharmaceutical industries, clinical research pharmacists and a pharmacist who is specialized in research for clinical pharmacy services and an academic researcher.