



GRADUATE PROGRAMS

FACULTY OF PHARMACEUTICAL SCIENCES
KHON KAEN UNIVERSITY



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Assistant Professor Dr. Narin Chansri
Dean of Faculty of Pharmaceutical Sciences

Master of Pharmacy Program in **Clinical** Pharmacy







Master of Pharmacy Program in Clinical Pharmacy

Faculty of Pharmaceutical Sciences

General information



- **Program**

Master of Pharmacy Program in Clinical Pharmacy



- **Degree**

M.Pharm. (Clinical Pharmacy)



- **Total credits**

≥ 36 credits (2 year program)



- **Study plan**

- 1) Type A1 Thesis only
- 2) Type A2 Course work and thesis



- **Language (Mode of teaching)**

Thai and English



- **Future career after graduation**

- (1) Hospital pharmacist
- (2) Community pharmacist
- (3) Instructor
- (4) Researcher

● Program structure

	Program structure	
	Type A1	Type A2
1) Compulsory	4*	14
2) Electives	-	10
3) Thesis	36	12
Total credits	36	36

*Compulsory for Type A1 (audit)

Code	Course	Credit
PS317 711	Research Methodology in Pharmacy Practice	3(3-0-6)
PS317 891	Seminar in Clinical Pharmacy	1(1-0-2)

Compulsory for Type A2

Code	Course	Credit
PS317 711	Research Methodology in Pharmacy Practice	3(3-0-6)
PS317 712	Advanced Pharmacotherapeutics	4(4-0-8)
PS317 713	Clinical Pharmacy Clerkship for Graduate I	3(0-18-9)
PS317 714	Clinical Pharmacy Clerkship for Graduate II	3(0-18-9)
PS317 891	Seminar in Clinical Pharmacy	1(1-0-2)

Electives for Type A2

Code	Course	Credit
PS357 830	Quality Control of Products	3(2-3-6)
PS317 831	Therapeutic Drug Monitoring	2(1-3-2)
PS317 832	Clinical Drug Information System	2(1-3-2)
PS317 833	Clinical Drug Use Evaluation	2(1-3-2)
PS317 834	Adverse Drug Reaction Monitoring	2(1-3-2)
PS317 835	Advanced Biopharmaceutics and Pharmacokinetics	2(2-0-4)

PS317 836	Clinical Research Design	2(2-0-4)
PS317 837	Communication Skills in Pharmacy Practice	2(1-3-2)
PS317 838	New Drug and Novel Concepts	2(2-0-4)
PS317 839	Literature Evaluation in Medical Sciences	2(2-0-4)
PS317 840	Advanced Pharmacoepidemiology	2(1-3-2)
PS317 841	Management in Pharmacy Practice	2(2-0-4)
PS317 842	Integrative Cardiovascular Pharmacology	2(2-0-4)
PS317 843	Good Pharmacy Practice in Community Pharmacy	2(1-3-2)
PS317 844	Current Issues of Pharmaceutical Care in Community Pharmacy	2(1-3-2)
PS317 845	Pharmaceutical Care in Primary Care Unit	2(1-3-2)
PS317 846	Advanced Palliative Care	2(1-3-2)
PS317 847	Trends of Pharmacotherapy in Infectious Diseases	2(1-3-2)
PS317 848	Pharmaceutical Care for Patients with Chronic Diseases	2(1-3-2)
PS317 849	Selected Topics in Clinical Pharmacy	2(1-3-2)

Thesis

Code	Course	Credit
PS317 898	Thesis	36 credits
PS317 899	Thesis	12 credits

Example of Study Plan

Year 1, Semester 1		Credits	
		Type A1	Type A2
PS317 711	Research Methodology in Pharmacy Practice	3(3-0-6)	3(3-0-6)
PS317 712	Advanced Pharmacotherapeutics	-	4(4-0-8)
PS317 713	Clinical Pharmacy Clerkship for Graduate I	-	3(0-18-9)
PS317 898	Thesis	9	-
Total credits		12	10
Accumulate credits		9	10

Year 1, Semester 2		Credits	
		Type A1	Type A2
PS317 714	Clinical Pharmacy Clerkship for Graduate II	-	3(0-18-9)
PS317 891	Seminar in Clinical Pharmacy	1(1-0-2)	1(1-0-2)
PS317 xxx	Elective Courses	-	6
PS317 898	Thesis	9	-
Total credits		10	10
Accumulate credits		18	20

Year 2, Semester 1		Credits	
		Type A1	Type A2
PS317 xxx	Elective Courses	-	6
PS317 898	Thesis	9	-
PS317 899	Thesis	-	4
Total credits		9	10
Accumulate credits		27	30

Year 2, Semester 2		Credits	
		Type A1	Type A2
PS387 898	Thesis	9	-
PS387 899	Thesis	-	6
Total credits		9	6
Accumulate credits		36	36

Course description

PS357 830	Quality Control of Health Products	3(2-3-6)
Prerequisite : No		
Quality control of drugs, dietary supplements, cosmetics and herbal products; national and international standards and regulations; quality control of raw materials; stability and contamination of the products		
PS357 833	Instrumental Analysis	4(2-6-8)
Prerequisite : No		
Techniques of high technology instruments quantitative and qualitative analysis; UV-visible spectrometry, spectrofluorometry, atomic absorption and emission spectrometry, electrochemical, chromatographic method and flow injection analysis		
PS357 834	Spectroscopic Method for Structure Elucidation	2(2-0-4)
Prerequisite : No		
Structure elucidation of organic compounds by spectroscopy ultraviolet-visible spectrometry, Infrared-spectroscopy, Mass spectrometry, Nuclear magnetic resonance spectrometry, interpretation of spectra.		
PS357 841	Biological Evaluation	2(1-3-4)
Prerequisite : No		
Important of biological evaluation; conventional assessment of biological activity, modern concept and method in biological evaluation, selection criteria for biological evaluation methodologies; method development in biological evaluation, safety and precautions in biological laboratory, treatment of wastes, case studies		
PS357 842	Medicinal Plant Tissue Culture	2(1-3-4)
Prerequisite : No		
Basic principles and technique of plant tissue culture, composition, storage, selection, and preparation of nutrient media, control of the appropriate conditions for tissue culture, application of genetic engineering for improvement of plant tissue culture		

PS387 811	Advance Thai Traditional Medicine	3(2-3-6)
Prerequisite : No		
Medicinal plant constituents and their pharmacological activities; relationship between herbal drug tastes, active ingredients and indications; interaction between crude drug in Thai traditional medicine and between herbal drug and modern drug; factor affecting stability of modern drug		
PS387 812	Technical Academic Communication	2(2-0-4)
Prerequisite : No		
Significance of specific communication in social/academic field, effective presentation of writings, presentation of projects and articles mainly by writing and speech, communication through articles with related procedures, including thesis and other writing followed the curriculum specification, ethics and rights with respect to those projects		
PS387 813	Research Methodology in Thai Traditional Pharmacy	2(1-3-4)
Prerequisite : No		
Process of research in Thai traditional pharmacy; types of research; research question setting; literature review; objective setting; statistics used in the research, research ethics; research proposal and research plan; data processing, data analysis and writing research report		
PS387 832	Crude Drugs Specification	2(1-3-4)
Prerequisite : No		
Herbal drug specification and pharmacognostic profiles, chemical profiles and physico-chemical profiles; monograph of crude drugs in various pharmacopoeias		
PS387 834	Pre-Clinical and Clinical Study of Herbal Drug	2(2-0-4)
Prerequisite : No		
Information necessary for pre-clinical and clinical study of herbal drugs, factors related to quality of herbal products, guideline and proposal writing for pre-clinical and clinical study of herbal drugs		
PS387 837	Botanical Biotechnology	2(2-0-4)
Prerequisite : No		
DNA and basic techniques in molecular biology, plant bioinformatics, plant molecular systematic, plant authentication, plant genetic engineering		

PS387 839	Research from Traditional and Indigenous Resources	3(2-3-6)
Prerequisite : No		
Traditional and indigenous knowledge, method for retrieving traditional, research methodology and research question development, involving traditional and indigenous knowledge		
PS387 840	Formulation and Industrial Thai Traditional Pharmacy	3(2-3-6)
Prerequisite : No		
Dosage forms, principle and methods of drug formulation, preparation techniques, stability evaluation, industrial production and marketing strategy of Thai traditional medicine		
PS387 891	Seminar in Thai Traditional Pharmacy I	1(1-0-3)
Prerequisite : No		
Selection, review and evaluation of literature on Thai traditional pharmacy, including presentation, discussion, report and teamwork skills		
PS387 892	Seminar in Thai Traditional Pharmacy II	1(1-0-3)
Prerequisite : No		
Selection, review and evaluation of literature on Thai traditional pharmacy, including presentation, discussion in English and teamwork skills		
PS387 898	Thesis	36 credits
Prerequisite : Permission from program committee		
Research in Thai traditional Pharmacy emphasis on the self procedure of data analysis and synthesis including literature review, experimental design, planning, experimentation, compiling, interpretation, discussion and suggestion, reporting, presentation and publication ethics.		
PS387 899	Thesis	12 credits
Prerequisite : Permission from program committee		
Research in Thai traditional pharmacy through the skill improvement processes and essential basic research methodologies including literature review, experimental design, planning, experimentation, compiling, interpretation, discussion and suggestion, reporting, presentation and publication ethics.		