



# GRADUATE PROGRAMS

FACULTY OF PHARMACEUTICAL SCIENCES  
KHON KAEN UNIVERSITY



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# Message from Dean

**Associate Professor. Paiboon Daosodsai, Ph.D.**

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The Faculty of Pharmaceutical Sciences of Khon Kaen University is one of the leading pharmaceutical institution in Northeast Region of Thailand with international importance in educational and research fields. In 2020, the faculty is in 201st – 250th in QS World University Rankings by Subject 2020 (Pharmacy and Pharmacology). Our missions are to produce qualified graduates with the advanced scientific knowledge and rich academic experience to maintain high quality research and to create new innovations and products.

Quickly developing and progressing changes in the international trends of pharmaceutical profession require the wide diapason of knowledge and integration of practical experience and research knowledge. Our pharmacy school ensure high quality graduate education that incorporates innovative aspects of educational training and research. The varieties of graduate programs in pharmaceutical sciences enable graduates to find the expertise field of their interest providing with an excellent foundation for the academic and professional career.

The Faculty of Pharmaceutical Sciences is internationally opened place. Every year we accept and graduate international students in different fields of pharmaceutical expertise. We ensure high standard research facilities with the equipped according to the laboratory standards work places and provide new laboratory equipment for conduction of research. We also provide a high-quality professional knowledge and supportive community to base a clinical practice. After graduation, many of our international graduate students bring obtained knowledge and skills back to their home countries, standing out with their affirming international perspective and strong sense of self. We highly support this trend and strive for its development in the future.

I would like to invite you to join the graduate program at our faculty and become a part of our family.

**Assoc. Prof. Dr. Paiboon Daosodsai**

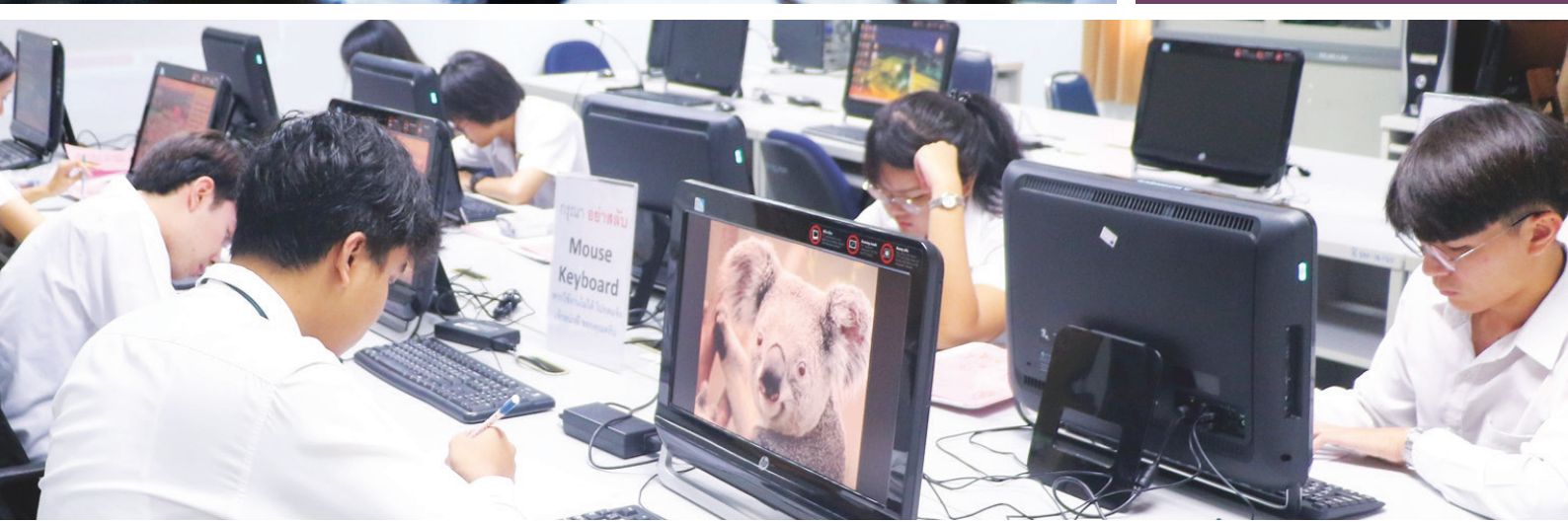
Dean, Faculty of Pharmaceutical Sciences, KKU



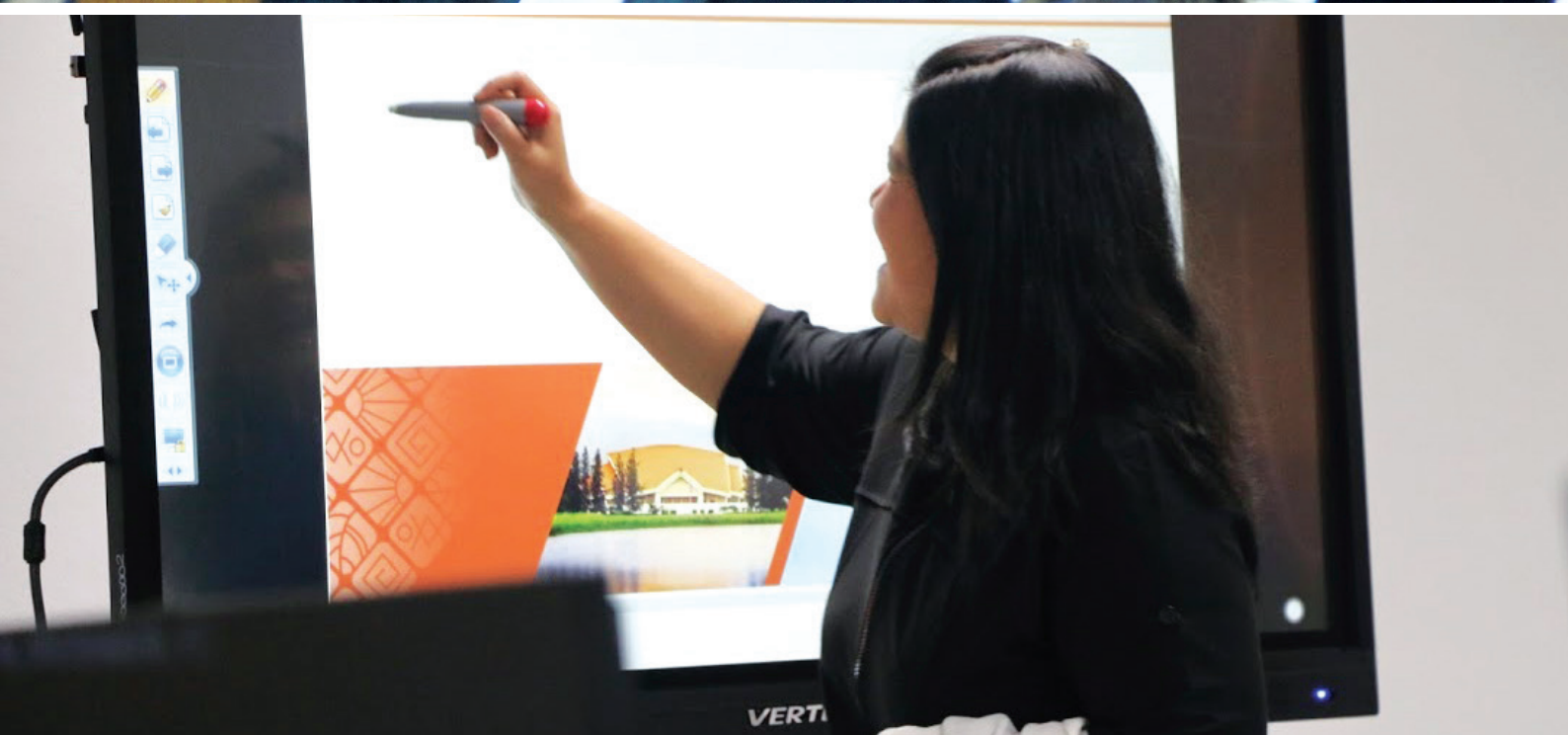
# Master of Pharmacy Program in Pharmacy Management











# Master of Pharmacy Program in Pharmacy Management

Faculty of Pharmaceutical Sciences

General information



- **Program**

Master of Pharmacy Program in Pharmacy Management



- **Degree**

M.Pharm. (Pharmacy Management)



- **Total credits**

≥ 36 credits (2 year program)



- **Study plan**

- 1) Type A1 Thesis only
- 2) Type A2 Course work and thesis
- 3) Type B Course work and Independent study



- **Language (Mode of teaching)**

Thai and English



- **Future career after graduation**

- (1) Hospital pharmacist
- (2) Community pharmacist
- (3) Regulatory affairs pharmacist
- (4) Managed care pharmacist



## ● Program structure

	Program structure		
	Type A1	Type A2	Type B
1) Compulsory	1*	15	15
2) Electives	-	9	15
3) Thesis	36	12	-
4) Independent Study	-	-	6
<b>Total credits</b>	<b>36</b>	<b>36</b>	<b>36</b>

\* PS337 891 Seminar in Pharmacy Management 1(1-0-2) (audit)

## Compulsory for Type A2, B

Code	Course	Credit
PS337 710	Research Methods in Pharmacy Management	2(2-0-4)
PS337 711	Financial Management for Pharmacist	2(2-0-4)
PS337 712	Supply Chain Management of Pharmaceutical Products	2(2-0-4)
PS337 713	Statistic Methods for Pharmacy Management	2(2-0-4)
PS337 714	Leadership Development in Pharmacy Management	2(2-0-4)
PS337 715	Health and Drug System Management	2(2-0-4)
PS337 716	Quality Management in Pharmacy Services	2(2-0-4)
PS337 891	Seminar in Pharmacy Management	1(1-0-2)

## Electives for Type A2, B

### Subject Groups

#### I. Financial Management

Code	Course	Credit
PS337 730	Modeling of Economic Evaluation of Drug Therapy	3(3-0-6)
PS337 731	Applied Pharmacoeconomics	3(3-0-6)
PS337 732	Pharmacy Benefit Management	3(3-0-6)

**II. Personnel Management**

<b>Code</b>	<b>Course</b>	<b>Credit</b>
PS337 733	Customer Relationship Management in Health Organization	3(3-0-6)
PS337 734	Strategic Management and Personnel Competency in Health Organization	3(3-0-6)
PS337 735	Practice for Leadership Development in Pharmacy Management	1(0-3-2)
PS337 736	Work Study in Health Organization	3(3-0-6)
PS337 737	Application of Management Tools in Pharmacy	3(3-0-6)
PS337 738	Quality-of-Life Measures in Outcomes Research	3(3-0-6)
PS337 739	Health Service Management	3(3-0-6)
PS337 740	Disease Management	3(3-0-6)
PS337 741	Health Policy Analysis	3(3-0-6)
PS337 742	Pharmacy Management in Primary Care Level	3(3-0-6)

**III. Others**

<b>Code</b>	<b>Course</b>	<b>Credit</b>
PS337 743	Patents and Intellectual Property Rights Protection	3(3-0-6)
PS337 744	Research Practicum in Pharmacy Management	3(1-6-3)
PS337 745	Advanced Methods in Pharmacoepidemiology	3(3-0-6)
PS337 746	Sociology and Anthropology for Pharmacy	3(3-0-6)
PS337 747	Knowledge Management in Pharmacy	3(3-0-6)
PS337 748	English for Communication in Pharmacy Practice	3(2-3-6)
PS337 749	Communication Skill Development in Pharmacy Management	3(3-0-6)
PS337 750	Consumer Protection Law in Pharmacy	3(3-0-6)
PS337 751	Analyzing Qualitative Data	1(1-0-3)
PS337 752	Health Impact Assessment	2(2-0-4)
PS627 853	Qualitative Research Methods	2(1-3-3)

## Thesis

Code	Course	Credit
PS337 898	Thesis	36 credits
PS337 899	Thesis	12 credits

## Independent Study

Code	Course	Credit
PS337 897	Independent Study	6 credits

## Example of Study Plan

Year 1, Semester 1		Credits		
		Type A1	Type A2	Type B
PS337 891	Seminar in Pharmacy Management	1(1-0-2)	-	-
PS337 710	Research Methods in Pharmacy Management	-	2(2-0-4)	2(2-0-4)
PS337 713	Statistic Methods for Pharmacy Management	-	2(2-0-4)	2(2-0-4)
PS337 711	Financial Management for Pharmacist	-	2(2-0-4)	2(2-0-4)
PS337714	Leadership Development in Pharmacy Management	-	2(2-0-4)	2(2-0-4)
PSXX XXX	Elective Courses	-	3	3
PS337 898	Thesis	9	-	-
<b>Total credits</b>		<b>10</b>	<b>11</b>	<b>11</b>
<b>Accumulate credits</b>		<b>9</b>	<b>11</b>	<b>11</b>



Year 1, Semester 2		Credits		
		Type A1	Type A2	Type B
PS337 715	Health and Drug System Management	-	2(2-0-4)	2(2-0-4)
PS337 716	Quality -Management in Pharmacy Services	-	2(2-0-4)	2(2-0-4)
PS337 891	Seminar in Pharmacy Management	-	1(1-0-2)	1(1-0-2)
PS337 712	Supply Chain Management of Pharmaceutical Products	-	2(2-0-4)	2(2-0-4)
PS337 xxx	Elective Courses	-	3	6
PS337 898	Thesis	9	-	-
<b>Total credits</b>		<b>9</b>	<b>10</b>	<b>13</b>
<b>Accumulate credits</b>		<b>18</b>	<b>21</b>	<b>24</b>

Year 2, Semester 1		Credits		
		Type A1	Type A2	Type B
PS337 897	Independent Study	-	-	3
PS337 898	Thesis	9	-	-
PS337 899	Thesis	-	6	-
PS337 xxx	Elective Courses	-	3	6
<b>Total credits</b>		<b>9</b>	<b>9</b>	<b>9</b>
<b>Accumulate credits</b>		<b>27</b>	<b>30</b>	<b>33</b>

Year 2, Semester 2		Credits		
		Type A1	Type A2	Type B
PS337 897	Independent Study	-	-	3
PS337 898	Thesis	9	-	-
PS337 899	Thesis	-	6	-
PS337 xxx	Elective Courses	-	3	6
<b>Total credits</b>		<b>9</b>	<b>9</b>	<b>9</b>
<b>Accumulate credits</b>		<b>36</b>	<b>36</b>	<b>36</b>



## Course description

<b>PS337 710</b>	<b>Research Methods in Pharmacy Management</b>	<b>2(2-0-4)</b>
Prerequisite : No		
Methodology for conducting research in pharmacy management, using quantitative and qualitative approaches; development of questionnaires and measurement scales; assessment of validity and reliability of the measures; frequently used research designs in pharmacy management for example survey, observational studies etc.		
<b>PS337 711</b>	<b>Financial Management for Pharmacist</b>	<b>2(2-0-4)</b>
Prerequisite : No		
Application of theories and tools of financial management and economics for pharmacist, cost accounting system, financial ratio analysis, investment decision analysis, budget impact analysis		
<b>PS337 712</b>	<b>Supply Chain Management of Pharmaceutical Products</b>	<b>2(2-0-4)</b>
Prerequisite : No		
Current and future trends of supply chain management in pharmaceutical industry, pharmaceutical supply chain management techniques, characteristics of the excellent pharmaceutical supply chain management, pharmaceutical inventory management in hospital		
<b>PS337 713</b>	<b>Statistic Methods for Pharmacy Management</b>	<b>2(2-0-4)</b>
Prerequisite : No		
Basic concepts of statistical analysis, descriptive statistics, parametric statistics for comparison including chi-square, t test, analysis of variance, nonparametric statistics, multiple linear regression, multiple logistic regression, and guideline for selecting statistic methods		
<b>PS337 714</b>	<b>Leadership Development in Pharmacy Management</b>	<b>2(2-0-4)</b>
Prerequisite : No		
Leadership theory, human resource management, organization behavior, communication and organizational culture, conflict management, change management, information utilization for leader, leadership development		

<b>PS337 715</b>	<b>Health and Drug System Management</b>	<b>2(2-0-4)</b>
Prerequisite : No		
Current health and drug system management, development of evidence-based drug policies in hospital and national level, models of drug system management in hospital and community, contemporary issues in of health and drug system management		
<b>PS337 716</b>	<b>Quality Management in Pharmacy Services</b>	<b>2(2-0-4)</b>
Prerequisite : No		
Basic concepts of quality management in pharmacy services both in patient and health care provider aspect, integrated patient-centered approach in the process of quality management, customer care and customer service satisfaction, using the quality management tools all of quantitative and qualitative method in developing, monitoring the quality of pharmacy services		
<b>PS337 730</b>	<b>Modeling in an Economic Evaluation of Drug Therapy</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Expected utility theory and patient preference for health outcomes; measurement of willingness to pay; applications of modeling for an evaluation of costs and outcomes of drug therapy, including decision analysis modeling, Markov modeling, and Monte Carlo simulation; estimation of life-time costs and life expectancy; issues in conducting a cost- effectiveness analysis		
<b>PS337 731</b>	<b>Applied Pharmacoeconomics</b>	<b>3(3-0-6)</b>
Prerequisite : No		
The application of economic principle and theories for efficientselection of medications and health technology or cost effective comparing resources used		
<b>PS337 732</b>	<b>Pharmacy Benefit Management</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Relationship between drug utilization process and health insurance system, comparative health care financing for pharmacy benefit management, measurement efficiency in drug utilization and pharmaceutical services under economics perspectives, design of health care benefit for drug therapy, drug cost containment strategies, Monitoring and evaluation in pharmacy benefit management		

<b>PS337 733</b>	<b>Customer Relationship Management in Health Organization</b>	<b>3(3-0-6)</b>
Prerequisite : No		
The characteristics and buying behavior of consumers for health services; Evaluation and decision making process; conditions for decision making and establishing the appropriate relationship with the consumers; roles and techniques in building relationship in both individual and social levels		
<b>PS337 734</b>	<b>Strategic Management and Personnel Competency in Health Organization</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Strategic direction, organization analysis, vision mission core value and goals determination, strategy indicators and balanced scorecard, strategy formulation, cascade strategy to departments and personnel, corporate strategy and personnel competency, evaluation and development personnel competency		
<b>PS337 735</b>	<b>Practice for Leadership Development in Pharmacy Management</b>	<b>1(0-3-2)</b>
Prerequisite : No		
Practice to develop the essential skills for leader: team working, motivation and inspiration, problem solving, positive thinking and moral for leader		
<b>PS337 736</b>	<b>Work Study in Health Organization</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Work method design; process analysis; multiple activity analysis; operational analysis; standardization standard practice; design time study; standardization of time study in wage incentive determination		
<b>PS337 737</b>	<b>Application of Management Tools in Pharmacy</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Application of management tools in pharmacy practice, consisting of tools in strategic management, systems thinking and systemic problem solving, system development and improvement, process improvement, project evaluation and new interesting tools		
<b>PS337 738</b>	<b>Quality-of-Life Measures in Outcomes Research</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Essential techniques in measuring quality of life as related to health outcomes of drug therapy; concepts, methods, and practical procedure for developing measures for assessing health status and the outcomes of drug therapy; choosing existing quality-of-life measures; formulating a construct of humanistic outcomes; body of knowledge in validating the developed measures		

<b>PS337 739</b>	<b>Health Service Management</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Essential concepts of health services management including case studies in health organization, process of resources management, health services environment, health services technology, structuring health services organization, risk management, quality assurance, information system application in managing health services organization		
<b>PS337 740</b>	<b>Disease Management</b>	<b>(3-0-6)</b>
Prerequisite : No		
Concepts of disease management in chronic disease, guideline management, data management, screening populations and patients, skills of health care providers, service delivery system that empower patient self management, assessment of effectiveness of disease management program, cost effectiveness analysis of disease management program, case studies including warfarin clinic, AIDS clinic, renal replacement therapy clinic, hypertension clinic, diabetes clinic, asthma clinic		
<b>PS337 741</b>	<b>Health Policy Analysis</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Health policy analysis, policy planning, policy implementation, aims and limitation of policy, and problems involved in policy implementation		
<b>PS337 742</b>	<b>Pharmacy Management in Primary Care Level</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Concepts of primary care, role of pharmacist in pharmacy service in primary care, drug inventory management, continuity of care in community management, health promotion in community management, health consumer protection management		
<b>PS337 743</b>	<b>Patents and Intellectual Property Rights Protection</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Theories, preamble, development of patent law in developed and developing countries, patentability of inventions, filing a patent application, patent searching and information, legal enforcement, drug patent and international trade; impact of patent and intellectual property rights on consumers, health services, health products, and drug system in Thailand		



<b>PS337 744</b>	<b>Research Practicum in Pharmacy Management</b>	<b>3(1-6-3)</b>
Prerequisite : No		
To learn and practice developing a potential research proposal, and preparing a research report. Literature search and synthesis for developing a potential research question. Preparing an individual research protocol consisting of conceptual framework including research hypotheses, measurement, data collection and analysis planning		
<b>PS337 745</b>	<b>Advanced Methods in Pharmacoepidemiology</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Advanced analytical methods in various designs of pharmacoepidemiologic studies, including analytic study, and clinical trial; identification and adjustment of important covariates, determining effect modification; validity concepts in exposure identification and outcome assessment; common analysis for multivariate models in determining beneficial and adverse effects of drug therapy and in identifying risk factors of drug therapy problem.		
<b>PS337 746</b>	<b>Sociology and Anthropology for Pharmacy</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Concepts and theories of sociology and anthropology in order to enhance social and cultural context which influence, ways of thinking and practice of people, which bringing about understanding toward both biomedicine and popular sectors		
<b>PS337 747</b>	<b>Knowledge Management in Pharmacy</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Concept of knowledge management, knowledge management knowledge creation and elicitation, knowledge capture and storage, knowledge transfer and dissemination, knowledge application and exploitation, knowledge activities, knowledge management tools, knowledge management in health care system and pharmacy organizations		
<b>PS337 748</b>	<b>English for Communication in Pharmacy Practice</b>	<b>3(2-3-6)</b>
Prerequisite : No		
A study of essential elements in medical and pharmaceutical terminology, using proper English communication skills in pharmacy practice. Listening, reading comprehension, critical appraisal of health science research articles, academic writing, giving oral or poster presentation, recognizing social etiquette and international standard of practice when dealing with foreign patients at hospitals or pharmacy stores		

<b>PS337 749</b>	<b>Communication Skill Development in Pharmacy Management</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Communication in pharmacy organization, concepts for effective communication, problems and problem solving in pharmacy organization communication, negotiation and evidence based communication		
<b>PS337 750</b>	<b>Consumer Protection Law in Pharmacy</b>	<b>3(3-0-6)</b>
Prerequisite : No		
Principle and theories of consumer protection law, evolution of consumer protection law, procedure of consumer protection enforcement, product liability law, service liability law, and case studies related to consumer protection in pharmacy services		
<b>PS337 751</b>	<b>Analyzing Qualitative Data</b>	<b>1(1-0-3)</b>
Prerequisite : No		
Theories and framework for analysis, data organizing, data verification, data display, coding, interpretation, drawing and verifying conclusion, computer program for analysis qualitative data and presentation of qualitative data analysis result		
<b>PS337 752</b>	<b>Health Impact Assessment</b>	<b>2(2-0-4)</b>
Prerequisite : No		
Concepts and principle of health impact assessment, value and purpose of HIA as a healthy public policy process, the role of health impact assessment in public policy, program and project, the steps and tasks of HIA, case studies of HIA in practice		
<b>PS627 853</b>	<b>Qualitative Research Methods</b>	<b>2(1-3-3)</b>
Prerequisite : No		
Types of qualitative research methods; observation, in-depth interview, focus group discussion. Literature review. Data analysis process. Writing a qualitative research report. Research ethics		

<b>PS337 891</b>	<b>Seminar in Pharmacy Management</b>	<b>1(1-0-2)</b>
Prerequisite : No		
Retrieval of information on contemporary issues in pharmacy management from journals, publications and other sources; processing of the collected information using systematic evaluation and synthesis; presentation of the information for group discussion		
<b>PS337 897</b>	<b>Independent Study</b>	<b>6 credits</b>
Prerequisite : Permission from program committee		
A topic on pharmacy management in accordance with the student's interest, proper literature review, and appropriate to research ethics, under the supervision of an independent study advisory committee, a part or the whole results of independent study be accepted for publishing in academic journal or presenting in academic conference with standard proceeding		
<b>PS337 898</b>	<b>Thesis</b>	<b>36 credits</b>
Prerequisite : Permission from program committee		
Conducting research on a topic in the area related to pharmacy management. Reviewing literature and writing the references. Writing the research questions. Analyse problem and apply to work practice. Research ethics. Report the research in the form of a thesis and defense it under the supervision of the thesis advisory committee, a part or the whole results of thesis beaccepted for publishing in a national or aninternational quality journal		
<b>PS337 899</b>	<b>Thesis</b>	<b>12 credits</b>
Prerequisite : Permission from program committee		
Conducting research on a topic in the area related to pharmacy management. Reviewing literature and writing the references. Writing the research questions. Analyse problem and apply to work practice. Research ethics. Report the research in the form of a thesis and defense it under the supervision of the thesis advisory committee, a part or the whole results of thesis be accepted for publishing in a national or an international quality journal or presenting in academic conference with standard proceeding		









