



MAE FAH LUANG UNIVERSITY



GRADUATE BULLETIN
2009



Graduate Bulletin 2009

Mae Fah Luang University Chiang Rai, Thailand

MFU

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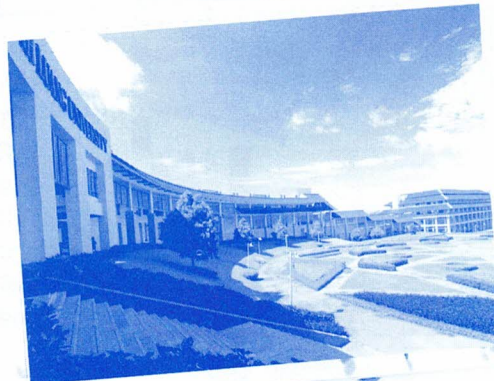
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Background

Mae Fah Luang University (MFU) was established as an autonomous public institution, under the Royal Charter, in 1998, with generous financial support from the Royal Thai Government. The University was established to meet the needs of the people of the North of Thailand, and to commemorate the gracious contribution of the King's Mother, Her Royal Highness Princess Srinagarindra, lovingly known to her subjects as "Mae Fah Luang." From its inaugural class of 64 students in 1998, MFU has become Thailand's fastest growing, post-secondary institution, with an enrollment of more than 8,000 students in 2009. After just ten years of operation, it is already well-known for the high quality of its teaching, research, and service to the people of the North, and to the country in general.



The campus consists of a large complex of modern, state-of-the-art buildings spanning more than 800 hectares. The campus is located in a spectacular setting of mountains and trees, conducive to teaching and learning in a clean, inviting environment. As the university has been growing, construction has recently been continued on a new lecture building, a modern gymnasium, outdoor sports fields and the Mae Fah Luang Hospital to serve as the public and community hospital in general.

Established to serve as both a national and a regional university, MFU also provides high-quality educational services and resources for the neighboring countries of the Greater Mekong Sub-region, and reaches out to all of Southeast Asia.





Faculty's Residence

A special service for University's personnel, the Faculty Residence offers a wide range of accommodations, namely, homes for singles, homes for families and studio flats, and units equipped with a living-room, bedroom, bathroom, pantry and necessary furniture items.

Medical Unit

This on-campus first-aid unit provides the staff and students with preliminary medical treatment by a physician from a provincial hospital, who is stationed at this unit for two days a week; on the other days staff from the Student Development Division are available



Post Office

A licensed on-campus post office offers post services such as the mailing and receiving of letters and parcels.

Banks

Currently, there are two banks located on campus-Bank of Ayudhaya and Bangkok Bank Public Companies. limited-for to staff, students and the public.



Food Centers

The canteens on the second floor of D1 Building and on the ground floor of E1 Building are open from 6 a.m. to 10 p.m. In addition, the Faculty Union cafeteria, is open from morning to evening, and the food shops near '7-ELEVEN', are open from 5-10 p.m. give students and staff a greater variety of dining options.

Wanaphirom Park

This is an arboretum-like park where arboricultural attractions can be appreciated.



Admission Requirements

Admission requirements for Master's Degree Programs

- (1) Applicants must have a Bachelor's Degree in a related field from an accredited university with a GPA of 2.50 or above.
- (2) If GPA is below 2.50 applicants must have a GPA of the core courses at 2.75 or above, or 1 year of working experience in a related field with a recommendation letter from an employer.
- (3) Never been disqualified by any institution.

Documents Required with an Application

- (1) A photocopy of an officially certified copy of the Bachelor's Degree.
- (2) A photocopy of transcripts, with the originals to follow.
- (3) A photocopy of identity card or passport, with the original to be presented upon registration.
- (4) Four 2.5 x 3.0 cm. photographs (no older than 6 months).

Admission requirements for Doctoral Degree Programs

- (1) Applicants must have either a Master's Degree or equivalent from an accredited university or a Bachelor's Degree (Honors) in a related field, with a GPA of 3.25 or above.
- (2) For research – focused programs, applicants must have experience in conducting research or writing a dissertation in a related field, and have a publication of the research or a dissertation in an acceptable journal.
- (3) Never been disqualified by any institution.

Documents Required with an Application

- (1) A photocopy of an officially certified copy of the Master's Degree or Bachelor's Degree (Honors)
- (2) A photocopy of transcripts, with the originals to follow
- (3) A photocopy of identity card or passport, with the original to be presented upon registration
- (4) Four 2.5 x 3.0 cm. photographs (no older than 6 months)

How to Apply

The application form is available at the Division of International Affairs, President's Office or on <http://www.mfu.ac.th/division/inter/admission.htm>. Please send the completed application form to :

Division of International Affairs
Mae Fah Luang University Chiang Rai 57100 Thailand
For further information, please contact
Phone : 6653-916024, 916026
Facsimile : 6653-916023
E-mail : inter@mfu.ac.th
URL: <http://www.mfu.ac.th/division/inter>

Programs of Study 2009

In the academic year 2008, Mae Fah Luang University offers 18 master's programs and 8 doctoral programs, as detailed below.

Master of Public Administration Program

This program aims to develop students' acquisition of theoretical and practical knowledge and ethics in public administration and related fields, and to acquire internationally practiced concepts of public administration, with the ability to integrate public and private operating principles.

Master of Education Program in Education Management

The principal objective of this program is to enhance knowledge and concepts of education management in search of up-to-date techniques employed in modern educational practices, with an attempt to develop education personnel and organizations to accommodate the modern society of constant political, economic and technological changes.

Master of Arts Program in Cultural Studies

This program concentrates on producing graduates with a profound ability to conduct cultural research, skills analyze cultural issues, develop new domains of cultural knowledge and apply academic knowledge to the handling of sociocultural changes. This program aims to generate cooperation, understanding and peace on the basis of equity amidst the cultural, economic and political diversity of the upper Greater Mekhong Sub-region.

Master of Arts Program in Teaching Chinese as a Foreign Language

This Program asims to produce graduates with the knowledge, ability and expertise in teaching Chinese as a foreign language. This program enables students lead research and development studies Chinese instruction efficiently, earn a living, and utilize chinese teachings to cultivate social awareness.

Master of Business Administration Program in Business Administration

This program aims to enhance and expand the knowledge of modern administration and management techniques which enable organizations to cope with social, political, economic and technological changes of the present day.

Master of Arts Program in Translation and Interpretation Chinese-Thai

This program primarily aims to produce professional translators and interpreters mastering in both theoretical and practical skills, also, produce lecturers who are able to teach translation and interpretation course, as well as do researches dealing with their field.

Master of Science Program in Natural Resources and Environmental Management (International Program)

The Master of Science in Natural Resources and Environmental Management is designed to develop human resources specifically at devising effective and relevant approaches to solving complex problems in natural resources and environmental management (NREM). The program, will contribute to the comprehensive design of NREM policy and planning, which covers Thailand and its neighboring countries with similar environments, within the Greater Mekong Sub-region (GMS).

Master of Business Administration Program in Logistics and Supply Chain Management

Master of Business Administration (Logistics and Supply Chain Management) program aims not only to produce professional mastering in concepts, theories, and principles in logistic and supply chain management, but also to provide students with integrated business perspectives in a multidisciplinary field. The program endeavors to equip the participants with the expertise and ability to apply their knowledge and expertise in order to improve business processes and solve problems related to logistics and supply chain.

Master of Laws Program

Designed to respond to the society's need for personnel with knowledge and expertise in law, this program is available with three specialized options. Advanced Criminal Law aims to produce experts in criminal law for judicial organizations and other state agencies; Business Law aims to produce business law experts in response to the business sector and other related professions; and Public Law aims to produce experts in public law to accommodate the increase and expansion of administrative law-enforcement organizations, such as the Administrative Court, and to serve other related state agencies.

Master of Science Program in Applied Chemistry

This program aims to produce personnel equipped with analytical, research, and development abilities in order to accommodate technological internationalism and use scientific knowledge into practice in response to the industrial sector's needs. This program also takes into consideration the fact that chemical research and findings play a constructive role in several branches of modern scientific and technological development.

Master of Science Program in Biological Sciences

This is a multidisciplinary program with an emphasis on every aspect of bio-scientific study and research, such as taxonomy, evolution, genetics, ecology, molecular genetics and reproduction.

Master of Science Program in Biotechnology

Biotechnology, a multidisciplinary subject essential to the present and future development of the country, concentrates on the enhancement, advancement and application of knowledge and development of agriculture, medicine, industry and environment for the common good.

Master of Science Program in Ceramic Industrial Technology

Designed to enhance the knowledge of the evolution of ceramic production technology, this program concentrates on strengthening scientific skills for research and development as well as for methodical problem-solving in the production process. Moreover, this program also integrates studies in business administration and management in response to the needs for new perspectives in ceramic industry development, for minimizing loss in the production process, and for the development of small- and medium-size enterprises that can adjust existing technologies to invent new products and to increase product-value.

Master of Science Program in Computational Science

This multidisciplinary program concentrates on developing personnel with knowledge of applied science, applied mathematics, computer science and other related disciplines. Simulation and computation by high-performance computers will be employed for purposes of analysis, decision-making and prediction. This program has been designed to promote new trends in research and development, which will give the country a competitive edge in computational science.

Master of Science Program in Materials Science

This program, which integrates coursework and thesis-writing, places emphases on properties of materials, the strengths and weaknesses of each material, and material-property control, all of which can be achieved through the implementation of a micro-structural system in conjunction with an appropriate production process.

Master of Science Program in Strategic Management Information System

The Master of Science in Strategic Management Information System is designed to provide intensive education and training in Strategic Management Information System and IT management. The three co-ordinates offered are theoretical foundations, applied practice and real-life experience. This is achieved through formal lectures in multimedia projection system, modern laboratory and real-life project work in association with industries. The aim is to produce IT leaders which will best serve the rapid growth of IT industry in Thailand.

Master of Science Program in Food Technology

The Food Technology program integrates the application of several contributory sciences related to various operations of food industries, food products development, quality control and assurance, and the use of statistics for designing experimental work and evaluating results, with consideration for the environment and safety.

Master of Science Program in Technology Management of Agricultural Produces

This plan emphasizes on management of agricultural produces in order to minimize postharvest losses, consequently, extend shelf life, with a focus on safety of the produces. Students learn to combine science and technology, postharvest handling, transportation and commercial management for effective management of produces. The program is designed as a multidisciplinary course, integrating scientific communication, critical thinking and problem solving into the curriculum.

Master of Science Program in Cosmetic Science

This curricula have been designed to provide fundamental and advanced knowledge as well as skills in cosmetic science for students wishing to pursue their careers in the cosmetic industry. The school is the first institution in Thailand to offer this discipline.

Master of Science Program in Public Health (International Program)

This Master program of the School of Health Science aims to produce Master degree graduates who are well grounded in public health academic, research, and management aspects, appropriate to the requirements of either a national or international future employer.

Master of Science Program in Anti-Aging and Regenerative Medicine

Master of Science Program in Anti-Aging and Regenerative Medicine provides the course to create component, potential and principal doctors to do the research on Anti-Aging and Regenerative Medicine. This will lead to get the new knowledge from the research that will be beneficial to the country.

Master of Science Program in Anti-Aging and Regenerative Science

Master of Science Program in Anti-Aging and Regenerative Science provides the course to create component, potential and principal students to do the research on Anti-Aging and Regenerative Science. This will lead to get the new knowledge from the research that will be beneficial to the country.

Master of Science Program in Dermatology

Master of Science Program in Dermatology has provided the course to create component, potential and principal doctors conduct the research in clinical dermatology and dermatological science. That is beneficial to the country.

Mae Fah Luang University welcomes students who are interested to further their studies in the following doctoral programs.

Doctor of Philosophy Program in Social Sciences

The primary aim of this interdisciplinary program is to produce graduates who are capable of developing abilities for research in social sciences, gaining depth and breadth of knowledge in social sciences and related fields, and preparing for intellectual leadership in social

Doctor of Philosophy Program in Natural Resources and Environmental Management (International Program)

The Ph.D Program in Natural Resources and Environmental Management is designed to develop human resources with good interdisciplinary knowledge and innovative research methodologies. Using English as the medium of instruction, it aims to facilitate original research contributions, which devise effective and relevant approaches to solving problems in natural resources and environmental management (NREM) in the Greater Mekong Sub-region (GMS), including Thailand and neighboring countries with similar environments. This is done to meet the goals of sustainable development for the Sub-region.

Doctor of Philosophy Program in Applied Chemistry

This program aims to produce personnel displaying academic excellence and research-development potential in the field of applied chemistry, which not only contributes substantially to scientific and technological advancement but also enables Thailand to compete in the international arena.

Doctor of Philosophy Program in Biosciences

This program primarily provides educational support and development for bio-scientists in domestic organizations, especially those in the upper-northern region. It enables graduates to strive for academic excellence and cultivates the capacity to develop an internationally competitive edge in the field of biosciences.

Doctor of Philosophy Program in Biotechnology

This program emphasizes biotechnology as a multidisciplinary subject that plays an essential role in national development, especially in agricultural, industrial, medical, and environmental areas.

Doctor of Philosophy Program in Computational Science

This multidisciplinary program of computational science aims to develop personnel with skills to integrate knowledge of applied science, applied mathematics, computer science and other related disciplines. Simulation and computation by high-performance computers will be utilized so as to yield increased power for understanding, decision-making and predicting.

Doctor of Philosophy Program in Materials Science

This program primarily aims to develop materials scientists with potential for initiatives, skills in forming hypotheses, and ability to plan and conduct research independently, so as to generate new domains of knowledge which culminate in socio-economically beneficial innovations.

Doctor of Philosophy Program in Dermatology

Doctor of Philosophy Program in Dermatology has provided the course facilitates the development of component, potential and principal doctors capable of conducting and developing innovational research in clinical dermatology and dermatological science.

Doctor of Philosophy Program in Food Technology

The Food Technology program is interdisciplinary that prepares the student to be a specialist for research in a specialized field of food technology. It also provides the new knowledge for students interested in applying food science and technology to the theoretical and practical aspects of the entire food chain.



School of Liberal Arts

- ② Master of Public Administration Program
- ② Master of Education Program In Education Management
- ② Master of Arts Program In Cultural Studies
- ② Master of Arts Program In Teaching Chinese as a Foreign Language
- ② Master of Arts Program In Translation and Interpretation

School of Liberal Arts

Mae Fah Luang University

The School of Liberal Arts, Mae Fah Luang University, was established with the primary mission to promote quality instruction, research, academic services, art and cultural preservation, and most importantly, the development of linguistically proficient graduates. It is our resolute intention both to excel in the teaching of English, Chinese, Japanese, and French and to emphasize the importance of information technology, which has become a worldwide occupational requirement. Our responsibilities also include the customization of our general education program to enhance students learning in sociocultural, economic, political, environmental, and health-hygiene areas, which serve as a basis on which other professional courses are pursued. At present, the School of Liberal Arts offers five postgraduate programs as follows:

1. Master of Public Administration Program
2. Master of Education Program in Education Management
3. Master of Arts Program in Cultural Studies
4. Master of Arts Program in Teaching Chinese as a Foreign Language
5. Master of Arts Program in Translation and Interpretation Chinese-Thai
6. Doctor of Philosophy Program in Social Sciences

Master of Public Administration Program

M.P.A. (Public Administration)

This program aims to stimulate students' acquisition of theoretical and practical knowledge including the ethics of public administration and related fields, and internationally accepted administrative concepts, with the ability to harmonies public and private operating principles. This program is available in three study plans.

Plan A(1): This plan requires students to take a non - credit course in research seminar or other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan A(2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Plan B: For this plan, students must fulfill credits for core courses and electives as required by the curriculum and have to pass a comprehensive examination administered by the university.

Master of Education Program in Education Management

M.Ed. (Education Management)

The principal objectives of this program are to enable students to develop far-sighted initiatives to cope with educational and socio-economic changes in society, to manage and utilize educational resources productively, to apply business management principles to education, to have leadership characteristics and ability to improve their affiliated organizations, and to maintain integrity and ethics so as to ensure effectual learning on the learners' part. This program is available in three study-plans

Plan A(1): this plan requires students to take a none credit course in research seminar or other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan A(2): This requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum

Plan B: For this plan, students have to fulfill credits for courses as required by the curriculum, write a research paper, and pass a comprehensive examination administered by the university.

Master of Arts Program in Cultural Studies

M.A. (Cultural Studies)

This program concentrates on producing graduates equipped with a profound ability to do cultural research, skills to analyze cultural issues, ability to develop new domains of cultural knowledge and ability to apply academic knowledge to cop with change. This program aims to generate cooperation, understanding and peace on the basis of equality amidst cultural, economic and political diversity in the Greater Mekhong Sub region. This program is available in two study-plans.

Plan A (1): This plan places heavy emphasis on thesis writing, which is translated to a minimum of 36 Credits, in order to present new findings or knowledge domains. Students may be required to take certain courses or do academic activities, both on a non-credit basis.

Plan A (2): This plan requires students to take 18 core courses and 6 electives, in addition to writing a 12 credit thesis, to complete a total of 36 Credits.

Master of Arts Program in Teaching Chinese as a Foreign Language

M.A. (Teaching Chinese as a Foreign Language)

This program aims to produce graduates with the knowledge, ability and expert in teaching Chinese as a foreign language. Students can lead research and development studies in Chinese instruction efficiently, earn a living, and utilize Chinese teaching to cultivate social awareness. This program is available in two study-plans.

Plan A (2): This plan requires students to take 18 core courses and 6 electives, in addition to writing a 12 credit thesis, to complete a total of 36 Credits.

Plan B: For this plan, students have to fulfill credits for courses as required by the curriculum, write a research paper, and pass a comprehensive examination administered by the university.

Master of Arts Program in Translation and Interpretation Chinese-Thai

M.A. (Translation and Interpretation Chinese-Thai)

This program primarily aims to produce professional translators and interpreters mastering in both theoretical and practical skills, also, produce lecturers who are able to teach translation and interpretation course, as well as do researches dealing with their field.

This program is available in two study-plans.

Plan A (2): This plan requires students to fulfill 20 core courses and 4 electives, in addition to writing a 12- credit thesis, to complete a total of 36 credits.

Plan B: For this plan, students have to fulfill credits for courses as required by the curriculum, write a research paper and pass a comprehensive examination administered by the university.

NB: This program is mainly taught in Chinese



Master of Public Administration Program

M.P.A. (Public Administration)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	36	Credits
3. Plan B	45	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	36	Credits
Major Required Courses	18	Credits
Thesis	18	Credits
3. Plan B	45	Credits
Major Required Courses	18	Credits
Major Elective Courses	21	Credits
Independent Study	6	Credits

Course Requirements

1. Plan A(1)	36	Credits
1010893 Thesis	Cr (Le-Pr-SS)*	36 (0-108-36)
2. Plan A(2)	36	Credits
Major Required Courses	18	Credits
1010701 Public Administration Theory	Cr (Le-Pr-SS)	3 (3-0-6)
1010702 Public Policy		3 (3-0-6)
1010703 Public Financial Management		3 (3-0-6)
1010801 Research Methodology in Public Administration		3 (3-0-6)
1010802 Human Resource Management in Public Sector		3 (3-0-6)
1010803 Public Organization and Management in Business Dimensions		3 (3-0-6)
Thesis	18	Credits
1010894 Thesis	Cr (Le-Pr-SS)	18 (0-54-18)
3. Plan B	18	Credits
Major Required Courses	Cr (Le-Pr-SS)	18 (3-0-6)
1010701 Public Administration Theory		3 (3-0-6)
1010702 Public Policy		3 (3-0-6)
1010703 Public Financial Management		3 (3-0-6)
1010801 Research Methodology in Public Administration		3 (3-0-6)
1010802 Human Resource Management in Public Sector		3 (3-0-6)
1010803 Public Organization and Management in Business Dimensions		3 (3-0-6)
Major Elective Courses	21	Credits
1010804 Information and Communication Technology Systems Management in Public Organization	Cr (Le-Pr-SS)	3 (3-0-6)
1010805 Strategic Public Management		3 (3-0-6)
1010806 Public Administration: Psychological Sociological and Anthropological Approaches		3 (3-0-6)

1010807	Ethics and Public Administration	3 (3-0-6)
1010808	Project Management and Evaluation	3 (3-0-6)
1010809	Public Law and Administration	3 (3-0-6)
1010821	Seminar in Public Administration	3 (3-0-6)
1010822	Seminar in Bureaucratic Reforms in Greater Mekong Sub-Region Countries	3 (3-0-6)
1010823	Seminar in Urban Management and Development in Thailand: Northern Case Studies	3 (3-0-6)
1010824	Seminar in Thai Government Role and Economical Management of Golden Quadrangle	3 (3-0-6)
1010825	Seminar in Public Administration in Golden Quadrangle	3 (3-0-6)
1010826	Seminar in Provincial Administration	3 (3-0-6)
1010827	Seminar in Local Administration	3 (3-0-6)
1010828	Seminar in Public Policy Formulation and Implementation	3 (3-0-6)
1010829	Special Topic in Public Administration	3 (3-0-6)
Independent Study		6 Credits
1010892	Independent Study	Cr (Le-Pr-SS) 6 (0-18-6)



Master of Education Program in Education Management

M. Ed. (Education Management)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	42	Credits
3. Plan B	42	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	42	Credits
Major Required Courses	24	Credits
Major Elective Courses	6	Credits
Thesis	12	Credits
3. Plan B	42	Credits
Major Required Courses	27	Credits
Major Elective Courses	9	Credits
Master Project	6	Credits

Course Requirements

1. Plan A(1)	36	Credits
1011891 Thesis	Cr (Le-Pr-SS)* 36 (0-108-36)	
2. Plan A(2)	24	Credits
Major Required Courses	Cr (Le-Pr-SS)	
1011701 Leadership and Change Management	3 (3-0-6)	
1011702 Strategic Management in Education	3 (3-0-6)	
1011704 Human Resource Management	3 (3-0-6)	
1011705 Business Application for Education Management	3 (3-0-6)	
1011706 Finance and Accounting in Education	3 (3-0-6)	
1011707 Statistics and Research Methodology in Education	3 (3-0-6)	
1011803 Innovation and Technology in Education Management	3 (3-0-6)	
1011821 Seminar on Education Management	3 (3-0-6)	

3. Plan B

Major Required Courses

		27 Credits
		Cr (Le-Pr-SS)
1011701	Leadership and Change Management	3 (3-0-6)
1011702	Strategic Management in Education	3 (3-0-6)
1011704	Human Resource Management	3 (3-0-6)
1011705	Business Application for Education Management	3 (3-0-6)
1011706	Finance and Accounting in Education	3 (3-0-6)
1011707	Statistics and Research Methodology in Education	3 (3-0-6)
1011708	Academic Management	3 (3-0-6)
1010821	Seminar in Public Administration	3 (3-0-6)

Major Elective Courses

Plan A(2)

6 Credits

Plan B

9 Credits

Cr (Le-Pr-SS)

1011801	Institutional Research and Learning Organization Development	3 (3-0-6)
1011802	Educational Institute and Stakeholder Relationship	3 (3-0-6)
1011804	Education Reform	3 (3-0-6)
1011805	Analysis and Criticism in Education	3 (3-0-6)
1011806	Quality Management in Education	3 (3-0-6)
1011807	Current Issue and Trend in Education	3 (3-0-6)

Thesis

Plan A (1)

36 Credits

1011891	Thesis	Cr (Le-Pr-SS) 36 (0-108-36)
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Plan A(2)

12 Credits

1011892	Thesis	Cr (Le-Pr-SS) 12 (0-36-12)
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Plan B

6 Credits

1011893	Master Project	Cr (Le-Pr-SS) 6 (0-18-6)
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Master of Arts Program in Cultural Studies

M.A. (Cultural Studies)

Curriculum

1. Plan A(1)

36 Credits

2. Plan A(2)

36 Credits

Curriculum Structure

1. Plan A(1)

36 Credits

Thesis

36 Credits

2. Plan A(2)

36 Credits

Major Required Courses

18 Credits

Major Elective Courses

6 Credits

Thesis

12 Credits

Course Requirements

1. Plan A(1)

36 Credits

1012891	Thesis	Cr (Le-Pr-SS) 36 (0-108-36)
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2. Plan A(2)**Major Required Courses****18 Credits**
Cr (Le-Pr-SS)

1012701	The Development of Cultural Concept System and Theories	3 (3-0-6)
1012702	Research Methodology in Cultural Studies	3 (3-0-6)
1012703	Art and Culture in Greater Mekong Sub-region	3 (3-0-6)
1012704	Cultural Information and Cultural Heritage Management	3 (3-0-6)
1012705	Seminar on Cultural Studies	3 (3-0-6)
1012706	Study of Local Knowledge Wisdom	3 (3-0-6)

Major Elective Courses**6 Credits**
Cr (Le-Pr-SS)

1012801	Cultural Dissemination Strategy	3 (3-0-6)
1012802	Identity and Diversity in Culture	3 (3-0-6)
1012803	Contemporary Culture	3 (3-0-6)
1012804	Cultural Ecology	3 (3-0-6)
1012805	Cultural Knowledge Center Management	3 (3-0-6)
1012806	Culture and Tourism	3 (3-0-6)
1012807	Sino and GMS Cultural Relationship	3 (3-0-6)
1012808	GMS Studies	3 (3-0-6)

Thesis**12 Credits**
Cr (Le-Pr-SS)
12 (0-36-12)

1012892	Thesis
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**Master of Arts Program in Teaching Chinese as a Foreign Language**

M.A. (Teaching Chinese as a Foreign Language)

Curriculum

1. Plan A(2)
2. Plan B

36 Credits
36 Credits**Curriculum Structure**

1. Plan A(2)

36 Credits

- Major Required Courses
- Major Elective Courses
- Thesis

18 Credits
6 Credits
12 Credits

2. Plan B

36 Credits

- Major Required Courses
- Independent Study

30 Credits
6 Credits**Courses Requirements**

1. Plan A(2)

36 Credits
18 Credits
Cr (Le-Pr-SS)**Major Required Courses**

1015701	Teaching and Learning the Sound System of Mandarin	3 (3-0-6)
1015702	Special Topics in the Chinese Philosophy	3 (3-0-6)
1015703	Chinese Vocabulary and Its Teaching	3 (3-0-6)
1015704	Chinese Grammar and Its Teaching	3 (3-0-6)
1015705	Teaching and Learning Chinese Characters	3 (3-0-6)
1015706	Seminar in Teaching Chinese as a Foreign Language	3 (3-0-6)

Major Elective Courses**6 Credits**
Cr (Le-Pr-SS)

1015707	Contrastive Analysis Between Chinese and Thai Languages	2 (2-0-4)
1015708	Research Methodology and Chinese Bibliography	2 (2-0-4)
1015801	Special Topics in Chinese Literature	2 (2-0-4)
1015802	Theories and Practice of Foreign Language Testing	2 (2-0-4)
1015803	Computer-aided Learning and Teaching of Chinese Language	2 (2-0-4)
1015804	Analysis and Application of Chinese Language Textbooks	2 (2-0-4)

	Thesis	12 Credits
1015805	Thesis	Cr (Le-Pr-SS) 12 (0-36-12)

2. Plan B

	Major Required Courses	30 Credits
		Cr (Le-Pr-SS)
1015701	Teaching and Learning the Sound System of Mandarin	3 (3-0-6)
1015702	Special Topics in the Chinese Philosophy	3 (3-0-6)
1015703	Chinese Vocabulary and Its Teaching	3 (3-0-6)
1015704	Chinese Grammar and Its Teaching	3 (3-0-6)
1015705	Teaching and Learning Chinese Characters	3 (3-0-6)
1015706	Seminar in Teaching Chinese as a Foreign Language	3 (3-0-6)
1015707	Contrastive Analysis Between Chinese and Thai Languages	2 (2-0-4)
1015708	Research Methodology and Chinese Bibliography	2 (2-0-4)
1015801	Special Topics in Chinese Literature	2 (2-0-4)
1015802	Theories and Practice of Foreign Language Testing	2 (2-0-4)
1015803	Computer-aided Learning and Teaching of Chinese Language	2 (2-0-4)
1015804	Analysis and Application of Chinese Language Textbooks	2 (2-0-4)

Independent Study

		6 Credits
		Cr (Le-Pr-SS)
1015806	Independent Study	6 (0-18-6)



Master of Arts Program in Translation and Interpretation Chinese-Thai

M.A. (Translation and Interpretation Chinese-Thai)

Curriculum

1. Plan A(2)	36 Credits
2. Plan B	36 Credits

Curriculum Structure

1. Plan A(2)	36 Credits
Major Required Courses	20 Credits
Major Elective Courses	4 Credits
Thesis	12 Credits
2. Plan B	36 Credits
Major Required Courses	27 Credits
Major Elective Courses	4 Credits
Independent Study	5 Credits

Course Requirements

1. Plan A(2)		36 Credits
Major Required Courses		20 Credits
		Cr (Le-Pr-SS)*
1018703	Translation Theory and Technique	2 (2-0-4)
1018704	Thai-Chinese Translation	4 (2-4-6)
1018705	Chinese-Thai Translation	4 (2-4-6)
1018706	Thai-Chinese Oral Interpretation 1	3 (1-5-4)
1018707	Chinese-Thai Oral Interpretation 1	3 (1-5-4)
1018801	Chinese-Thai Oral Interpretation 2	3 (1-5-4)
1018807	Translation Practice	1 (0-2-1)
Major Elective Courses		4 Credits
		Cr (Le-Pr-SS)*
1018709	Translation of Academic Works	2 (1-2-3)
1018802	Thai-Chinese Oral Interpretation 2	3 (1-5-4)
1018803	Translation of Cultural Works	2 (1-2-3)
1018804	Translation of Audio-Visual Media Works	2 (1-2-3)

1018805	Translation of Poetry	2 (1-2-3)
1018806	Translation of Literary Works	2 (1-2-3)
1018808	Translation Assessment Editing	2 (1-2-3)

Thesis

12 Credits
Cr (Le-Pr-SS)*
 12 (0-12-36)

1018810	Thesis
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2. Plan B

Major Required Courses

36 Credits
27 Credits
Cr (Le-Pr-SS)

1018701	General Linguistics	2 (2-0-4)
1018702	World Literature	2 (2-0-4)
1018703	Translation Theory and Technique	2 (2-0-4)
1018704	Thai-Chinese Translation	4 (2-4-6)
1018705	Chinese-Thai Translation	4 (2-4-6)
1018706	Thai-Chinese Oral Interpretation 1	3 (1-5-4)
1018707	Chinese-Thai Oral Interpretation 1	3 (1-5-4)
1018801	Chinese-Thai Oral Interpretation 2	3 (1-5-4)
1018802	Thai-Chinese Oral Interpretation 2	3 (1-5-4)
1018807	Translation Practice	1 (0-2-1)

Major Elective Courses

4Credits
Cr (Le-Pr-SS)

1018709	Translation of Academic Works	2 (1-2-3)
1018803	Translation of Cultural Works	2 (1-2-3)
1018804	Translation of Audio-Visual Media Works	2 (1-2-3)
1018805	Translation of Poetry	2 (1-2-3)
1018806	Translation of Literary Works	2 (1-2-3)
1018808	Translation Assessment Editing	2 (1-2-3)

Independent Study

5 Credits
Cr (Le-Pr-SS)
 5 (0-15-5)

1018809	Independent Study
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* Cr : Credits
 Le : Lecture
 Pr : Practice
 SS : Self Study

Descriptions ::

School of Liberal Arts

- 1010701 Public Administration Theory 3(3-0-6)**
A study of theories and principal concepts of public administration, with emphases on modern and post-modern theories and with consideration to different concepts in relation to their hypotheses, patterns, values and philosophy.
- 1010702 Public Policy 3(3-0-6)**
A study of theories and principals of public policy, including policy making, policy implementation and policy analysis and evaluation emphases on implement the policy in the public sector.
- 1010703 Public Financial Management 3(3-0-6)**
A study of theories and principal concepts of financial management, budgeting of public sector both in the past and current concepts.
- 1010801 Research Methodology in Public Administration 3(3-0-6)**
A study of principal theories and concepts of Modern Research Methodology in public administration. Considering of basic philosophy, aim of study research, hypothesis upon research design, data collecting, data analysis in public administration.
- 1010802 Human Resource Management in Public Sector 3(3-0-6)**
A study of theories and concepts of human resource management in public sector including planning, recruitment, selection, training development and wage and salary administration.
- 1010803 Public Organization and Management in Business Dimensions 3(3-0-6)**
A study of principal theories and concepts of administration of different types of public or organizations ,with emphases on application, actual administration, and understanding of business-oriented, competency-minded ,cost-conscious and ethical style of administration.
- 1010804 Information and Communication Technology Systems Management in Public Organization 3(3-0-6)**
A study of theories and principal concepts of information, information system development of system in order to add the effectiveness in public sector management.
- 1010805 Strategic Public Management 3(3-0-6)**
Study of theories, process, strategic public management technique, strategic implementation, monitoring and controlling strategy in the public sector for both efficiency and effectiveness under the limitation of changing environment by considering of internal and external factor in the relation of finance, marketing, human resource and organization management.
- 1010806 Public Administration :Psychological Sociological and Anthropological Approaches 3(3-0-6)**
A study of principal knowledge and factor influence in management in terms of psychological, sociological and anthropological Approaches.
- 1010807 Ethics and Public Administration 3(3-0-6)**
A study of the principal of political philosophy and ethics in the relation of public administration, public policy, problem and conflict analysis in terms of value, fact and ethics in public administration.
- 1010808 Project Management and Evaluation 3(3-0-6)**
A study of principal concepts and the essentials of planning and project evaluation with emphases on making and analyzing the feasibility study of project, writing of project proposal , writing of plan of acting including directing monitoring and project evaluation.

- 1010809 Public Law and Administration 3(3-0-6)**
A study of management and public law evaluation, the analysis of the relation between state, society analysis of the relation between state, society and law with focus on public sector management, law issue and contemporary management in the process of public administration.
- 1010821 Seminar in Public Administration 3(3-0-6)**
Seminar in the principal concept of theories, research and public administration issues.
- 1010822 Seminar in Bureaucratic Reforms in Greater Mekong Sub-Region Countries 3(3-0-6)**
In order for students and instructor to exchange the ideas about bureaucratic reform in GMS countries.
- 1010823 Seminar in Urban Management and Development in Thailand: Northern Case Studies 3(3-0-6)**
In order for students and the instructor to exchange ideas concerning the conditions of state's role and administrative environment; reactions of the society and market to state's administrative process; scope and restrictions of state's administrative process; influence of administrative structure on the society; relationship between organization culture and the society, and that between research results concerning occupational preferences and the society; problems of state's delivery of its services and means of solution, with an emphasis on the macro-contexts of North Thailand and the Golden Quadrangle countries.
- 1010824 Seminar in Thai Government Role and Economical Management of Golden Quadrangle 3(3-0-6)**
In order for students and instructor to exchange the ideas concerning the government's role of public sector management and means to earn mutual economic benefit for the Golden Quadrangle countries.
- 1010825 Seminar in Public Administration in Golden Quadrangle 3(3-0-6)**
In order for students and instructor to exchange ideas about public administration of the Golden Quadrangle country as well as to present administrative methods that will give rise to collaboration among countries in the zone.
- 1010826 Seminar in Provincial Administration 3(3-0-6)**
In order for students and instructor to exchange ideas about the provincial administration creation mutual benefit between agencies of different affiliations, feasibility in adopting the "CEO governor" system, including strengths and weaknesses and means of development.
- 1010827 Seminar in Local Administration 3(3-0-6)**
In order for students and instructor to exchange ideas about the seminar in local administration.
- 1010828 Seminar in Public Policy Formulation and Implementation 3(3-0-6)**
In order for students and instructor to exchange ideas about the principal of public policy of Thailand, policy analysis consentaion to policies, policy implementation.
- 1010829 Special Topic in Public Administration 3(3-0-6)**
To raise the public administration issues of interest for a in-depth study.
- 1010892 Independent Study 6(0-18-6)**
To study and research a topics of personal interest under the advisors' closed supervision including research methodology, research devices, application statistics to research, analysis and conclusion.
- 1010893 Thesis 36(0-108-36)**
To study and research a topic concerning public administration under the advisors close supervision and to culminate ideas and information into a thesis.
- 1010894 Thesis 18(0-54-18)**
To study and research a topic concerning public administration under the advisors close supervision and to culminate ideas and information into a thesis.

1011701 Leadership and Change Management**3(3-0-6)**

Emphasis is on the nature of change, causes, and effects of change philosophy and strategies of managing change leadership, potential of leaders, responsibility, duty of leaders in solving problems and change management including the development of educational leaders.

1011702 Strategic Management in Education**3(3-0-6)**

The subject involves modern strategic management, principles and techniques of tactical management, and analysis of the educational environment. It also includes developing various aspects of educational management, planning how to achieve the tactics, and determining an index and a system of evaluation.

1011703 Educational Policy and Planning**3(3-0-6)**

The subject presents the visual development and goals for educational management. Its focuses are also the processes of setting a policy and managing education, the factors effecting educational policy, the performance influencing an achievement of the set policy, educational needs analysis, and the importance of stakeholders' participation in setting policy and educational plan.

1011704 Human Resource Management**3(3-0-6)**

Principles and concepts in human resource management, the development of staff's capability in education which covers morality, ethics, process of practicing and developing 'being a good teacher', and methods of evaluation and reinforcement are the main emphasis of this course. It will also include how to provide opportunities to develop personal ability, develop welfare systems, security in life and skills, solving problems together, maintain the rules, and adapt practicing structure.

1011705 Business Application for Education Management**3(3-0-6)**

This course provides individuals with knowledge of the difference between business management and educational management, the importance of marketing and marketing principles for educational institutions, the analysis on environmental factors influencing educational management and tactics for establishing good image of the institutes.

1011706 Finance and Accounting in Education**3(3-0-6)**

The course presents budgeting, financial institutions, and scholarships. Decision making for an educational investment, accounting system in educational institutions, cost calculation, internal inspection system, asset management and inventory and information management system in finance and accounting are also emphasized in this course.

1011707 Statistics and Research Methodology in Education**3(3-0-6)**

This core course helps individuals define the rules for statistical research, roles of educational applied statistics, statistics used in research and analysis, both quantitative and qualitative, hypothesis and variable. It will also expand knowledge of accomplishing a research project; establishing a topic, collecting information, evaluating, analyzing, summarizing and presenting the results.

1011708 Academic Management**3(3-0-6)**

The course mainly provides curriculum management systems, components and factors supporting the use of the curriculum, teaching and learning supervision, evaluation, and curriculum and staff development.

1011801 Institutional Research and Learning Organization**3(3-0-6)**

The course provides students' opportunity to study and analyze factors affecting the educational status, and establish concepts in order to search the information and learn the related problems from it. The research is expected to serve the development of the systems in various institutes to become centers for learning and an evaluation of institutional status, and working and institutional culture.

1011802 Educational Institute and Stakeholder Relationship**3(3-0-6)**

The course introduces collaboration and provision of community knowledge base, stakeholders' needs analysis, negotiation, mobilization and allocation of resources and community intellectuals within and outside educational institutions and community.

- 1011803 Innovation and Technology in Education Management 3(3-0-6)**
The course presents technology in educational management. It trains students how to explore the information technology in developing educational management and IT network for administration, and bring teaching and learning through innovation and technology. It also helps find technological trends influential on education.
- 1011804 Education Reform 3(3-0-6)**
It focuses on cause, necessity and conception of educational reform, educational situation in relation to economic, social, cultural contexts and global changes, including a leader and backers in the process of an educational reform. The administration of a reforming policy bringing about practice and achievement and comparative educational reform are also comprised in this course.
- 1011805 Analysis and Criticism in Education 3(3-0-6)**
The course provides systems and analyzing methods involving educational information, reference and evidence. This can lead to a presentation of chronological events and a practice in critical thinking and analysis bringing about criticism.
- 1011806 Quality Management in Education 3(3-0-6)**
It presents quality management system, its importance and process, roles of administrators towards quality assurance, the development and improvement of educational standard, index for inspection and evaluation of educational quality.
- 1011807 Current Issue and Trend in Education 3(3-0-6)**
This course concerns current issues and trends in education.
- 1011821 Seminar on Education Management 3(3-0-6)**
The seminar is based on concepts, theories, research, and problems involving educational management.
- 1011891 Thesis 36(0-108-36)**
Students must study and search for the information through research methodology for a chosen topic related to educational management issues. The written work will then be produced from their study and research. There will be close supervision of their supervisor.
- 1011892 Thesis 12 (0-36-12)**
Students need to study and search for information through research methodology for a chosen topic related to educational management issues. The written work will then be produced from their study and research. There will be close supervision of their supervisor.
- 1011893 Master Project 6 (0-18-6)**
Each student must chooses a topic of personal interest, which is related to educational management issues. The research methodology will be under close supervision of their supervisor.
- 1012701 The Development of Cultural Concept System and Theories 3(3-0-6)**
To develop conceptual systems cultural research and theories, studying changes in relation to social, economic, political, artistic, scientific, technological and eco-cultural contexts, and emphasizes skills for academic analysis and synthesis.
- 1012702 Research Methodology in Cultural Studies 3(3-0-6)**
To focus on cultural-research methodology, qualitative research, selection of research issues, field work to collect historical data through documents and through narration, data evaluation and examination, data analysis, research conclusion and research presentation.
- 1012703 Art and Culture in Greater Mekong Sub-region 3(3-0-6)**
To focus on development of arts and cultures in each kingdom's civilization, inter-ethnic relationships, ethnic identity, ethno-semiology, religions, beliefs and values as manifested in different forms of arts and culture, changes, and contemporary socio-cultural phenomena in GMS countries.

1012704 Cultural Information and Cultural Heritage Management 3(3-0-6)

To examine knowledge of community-level and urban-level management of cultural heritage and knowledge of planning and preservation, of arranging activities, of organization management, and of integration. It also focuses on both material cultural heritage such as ancient edifices, memorials and architectures, and intellectual cultural heritage, including technology of information management for primary, secondary and electronic documents, revision, review, analysis, evaluation and management of documents and data, and various means of information technology services.

1012705 Seminar on Cultural Studies 3(3-0-6)

To study, surveys and present knowledge of culture in relation to social changes, according to the cultural studies framework. It discusses different contents, concepts and theories of didactic cultures, cultural anthropology, contemporary cultures, community cultures and future trends in culture studies.

1012706 Study of Local Knowledge Wisdom 3(3-0-6)

To examine and analyze factors and elements of existence and changes of folk wisdom in communities and societies, wisdom and development, and process of application of wisdom as cultural heritage and social foundation.

1012801 Cultural Dissemination Strategy 3(3-0-6)

Aims to enhance ability to produce academic media for culture studies, which includes written media, printed media, photographic media, motion pictures, integrated media, and various types of contemporary innovative media. It also stresses studies of target groups, cultural dissemination and publication channels for purposes of developmental application.

1012802 Identity and Diversity in Culture 3(3-0-6)

To study cultural diversity in socio-economic, legal, scientific, and technological contexts, cultural disputes, acculturation, and idealism based on various ideas and theories.

1012803 Contemporary Culture 3(3-0-6)

To study contemporary concepts attempting to explain social phenomena amongst different groups, including peripheral people, women, disadvantaged children, homeless people, and cross-border migrants. It also examines cultural industry and people with idiosyncratic characteristics resulting from contemporary changes in social, economic, political, scientific and technological conditions.

1012804 Cultural Ecology 3(3-0-6)

To examine cultural environment, wisdom as a means to manage natural resources, beliefs and values of different ethnic groups, communities in relation to eco-cultural activities, and the state's policy concerning cultural ecology.

1012805 Cultural Knowledge Center Management 3(3-0-6)

To study concepts and theories of cultural learning centers, such as museums, halls of arts and culture, collection and registration of objects, material conservation, management of cultural studies in cultural centers, museums and halls of arts, and relationships and roles of such places and the community and society.

1012806 Culture and Tourism 3(3-0-6)

To study concepts to promote culture as a tourist attraction to stimulate exchange of cultural knowledge. It also discusses effects of tourism on culture, cultural products to promote tourism, and analysis of factors and elements whereby a community can sustainably manage its culture to facilitate tourism.

1012807 Sino and GMS Cultural Relationship 3(3-0-6)

To study the history of relationships between China and other GMS countries, focusing on the cultural aspects in relation to the economic and political contexts, contemporary relationships, mutual interests, political and economic negotiation, symbolism, beliefs, values, and idealism, which are undergoing changes.

1012808 GMS Studies**3(3-0-6)**

Comparative study and analysis of the current problems, identity myth, facing the Mekong Basin countries, at internal and international levels, at present and in the future. The problems represent and emphasize the characteristic of the Mekong basin as a whole, including the spatial linkages, relationship and mutual understanding, and vice-versa, which directly and indirectly affect the appropriate directions of global development.

1012891 Thesis**36 (0-108-36)**

The student must study or conduct research concerning cultural issues or problems, based on the research methodology, under close supervision by thesis advisors, and culminate the findings in the form of a thesis.

1012892 Thesis**12 (0-36-12)**

The student must study or conduct research concerning cultural issues or problems, based on the research methodology, under close supervision by thesis advisors, and culminate the findings in the form of a thesis.

1015701 Teaching and Learning the Sound System of Mandarin**3 (3-0-6)**

Teaching and learning the sound system of Mandarin Chinese, standard pronunciation of Chinese tones, constant flow and pauses, accents and intonation and the application of aforementioned statements for Chinese sound system teaching.

1015702 Special Topics in Chinese Philosophy**3 (3-0-6)**

The study and analysis of moral topics and codes of conduct regarding the knowledge of Chinese Philosophy and the application of aforementioned statements for special topics in Chinese philosophy teaching.

1015703 Chinese Vocabulary and Its Teaching**3 (3-0-6)**

The study of how to learn and teach word structures, meanings, parts of speech and grammatical functions, as well as Chinese vocabulary and the analysis of the aforementioned statements.

1015704 Chinese Grammar and Its Teaching**3 (3-0-6)**

The study of how to learn and teach the identical and different formats of Thai and Chinese languages concerning the grammar rules of both languages and the analysis of the aforementioned statements.

1015705 Teaching and Learning Chinese Characters**3 (3-0-6)**

Theories and knowledge of Chinese characters applicable for Chinese language teaching and know how to apply the Chinese characters for in teaching.

1015706 Seminar in Teaching Chinese as a Foreign Language**3 (3-0-6)**

Seminar on theories, schools of thought and pedagogical practices on Teaching Chinese as a Foreign Language efficiently applicable.

1015707 Contrastive Analysis between Chinese and Thai Languages**2 (2-0-4)**

The contrasts of Chinese and Thai languages in sound systems, vocabulary, grammar rules and appropriate application in different social contexts.

1015708 Research Methodology and Chinese Bibliography**2 (2-0-4)**

The study of research methodology, Chinese bibliography and resources of Teaching Chinese as a Foreign Language.

1015801 Special Topics in Chinese Literature**2 (2-0-4)**

The evolution of Chinese literature, social conditions affecting the underlying works, analysis and discussion on the special topics lying in the important Chinese literature.

1015802 Theories and Practice of Foreign Language Testing**2 (2-0-4)**

Theories and techniques dealing with the design of foreign language proficiency test.

- 1015803 Computer-aided Learning and Teaching of Chinese Language 2 (2-0-4)**
Theories and ideas of how to use as well as creating computer programs for Chinese language teaching.
- 1015804 Analysis and Application of Chinese Language Textbooks 2 (2-0-4)**
Analysis and proper application of Chinese language textbooks being in Accordance with the objectives of the course.
- 1015805 Thesis 12 (0-36-12)**
Conducting a research dealing with teaching Chinese as a foreign language and degree presenting.
- 1015806 Independent Study 6 (0-18-6)**
Conducting a research dealing with teaching Chinese as a foreign language and presenting in paper .
- 1018701 General Linguistics 2 (2-0-4)**
The definition and scope of linguistics; general knowledge of descriptive linguistics, historical linguistics, comparative linguistics, and socio-linguistics; linguistics as related to translation.
- 1018702 World Literature 2 (2-0-4)**
Overview of the development of literature of different countries in terms of its significance to life and society; literature as related to the social environment, philosophy, aesthetics, different forms of art and culture, and various sciences.
- 1018703 Translation Theory and Technique 2 (2-0-4)**
The theory, technique, process and methodology of translation and oral interpretation; translator and interpreter training; research in translation and interpretation.
- 1018704 Thai-Chinese Translation 4 (2-4-6)**
The theory and art of translation from Thai into Chinese and their application; practice in analyzing, interpreting and translating different Thai texts, using translation style and process suitable for different types of text; practice in detecting and correcting faults in the translated Chinese version; practice in evaluating translation works and editing translated works.
- 1018705 Chinese-Thai Translation 4 (2-4-6)**
The theory and art of translation from Chinese into Thai and their application; practice in analyzing, interpreting and translating different Chinese texts, using translation style and process suitable for different types of text; practice in detecting and correcting faults in the translated Thai version; practice in evaluating translation works and editing translated works.
- 1018706 Thai-Chinese Oral Interpretation 1 3 (1-5-4)**
The theory and art of oral interpreting from Thai into Chinese and their application; principles and technique in getting main ideas and note-taking; discussion and critiquing of selected Thai-Chinese oral interpretation; analysis of problems and problem solving in interpretation; interpreter's ethics; interpretation simulation practice; consecutive interpreter's skills practice from Thai into Chinese on general topics.
- 1018707 Chinese-Thai Oral Interpretation 1 3 (1-5-4)**
The theory and art of oral interpretation from Chinese into Thai and their application; principles and technique in getting main ideas and note-taking; discussion and critiquing of selected Chinese-Thai oral interpretation; analysis of problems and problem solving in interpretation; interpreter's ethics; interpretation simulation practice; consecutive interpreter's skills practice from Chinese into Thai on general topics.
- 1018709 Translation of Academic Works 2 (1-2-3)**
Application of the translation theory and technique to academic translation; practice in analyzing, interpreting and translating Chinese or Thai academic texts of various types including articles, books and textbooks; practice in evaluating and editing Chinese-Thai academic works translated.

1018801 Chinese-Thai Oral Interpretation 2**3 (1-5-4)**

Application of the theory, principle, process and technique of oral interpretation from Chinese into Thai; practice in consecutive interpreting for interviews, in conversations and in talks between important persons on topics of trade, politics, diplomacy, education and culture; practice of basic skills in Chinese-Thai simultaneous interpretation for conferences.

1018802 Thai-Chinese Oral Interpretation 2**3 (1-5-4)**

Application of the theory, principle, process and technique of oral interpretation from Thai into Chinese; practice in Thai to Chinese consecutive interpreting for interviews, in conversations and in talks between important persons on topics of trade, politics, diplomacy, education and culture.

1018803 Translation of Cultural Works**2 (1-2-3)**

Application of knowledge and understanding of Chinese-Thai culture and translation methods in translation of works on art, culture, religion and philosophy; practice in analyzing, interpreting and translating texts on different forms of culture from Chinese into Thai and from Thai into Chinese.

1018804 Translation of Audio-Visual Media Works**2 (1-2-3)**

Prerequisite: None

The theory and technique of translation of audio-visual works; discussion, analysis and critiquing of selected Chinese and Thai translated works, practice in analyzing, interpreting and translating Chinese media works for the radio, TV, video and films, aiming at transferring content, word meaning and language.

1018805 Translation of Poetry**2 (1-2-3)**

The theory, technique and method of translation of different types of poetry; application of knowledge in Chinese verse literature in translating Chinese poetic works into Thai; practice in analyzing, interpreting and translating ancient, modern and contemporary Chinese verses into beautiful Thai prose or verse forms.

1018806 Translation of Literary Works**2 (1-2-3)**

Survey of literary works translated from Chinese into Thai; basic theory and method of literature translation, aesthetics of classic literature and poetry translated; evaluation of translated literary works; practice in analyzing, interpreting and translating prose literary works or contemporary short stories from Chinese into Thai.

1018807 Translation Practice**1 (0-2-1)**

Analysis, interpretation and translation of Chinese manuscripts into Thai, or Thai into Chinese aiming at accuracy in content and suitable language register; a project work of 10,000-20,000 Chinese characters is .

1018808 Translation Assessment Editing**2 (1-2-3)**

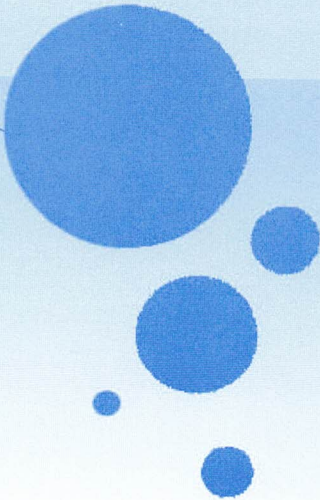
Assessment of selected Thai and Chinese translation works, comparing the translated version with the original text in terms of content and intent accuracy, and choice of words and language register; practice of editing skills for different types of Chinese-Thai translation works.

1018809 Independent Study**5 (0-15-5)**

Research on problematic issues in Chinese-Thai translation and oral interpretation, a project written in 20,000 Chinese characters.

Course No. 1018810 Thesis**12 (0-36-12)**

Research on problematic issues in Chinese-Thai translation and oral interpretation, a thesis written in 40,000-50,000 Chinese characters and translated into Thai at one-fourth the length of the Chinese version.



School of Management

- ② Master of Business Administration Program In Business Administration
- ② Master of Business Administration Program In Logistics and Supply Chain Management
- ② Master of Science Program In Natural Resources and Environmental Management (International Program)

School of Management

Mae Fah Luang University

The School of Management aims to provide equal opportunities for quality education in which students pursue a specialized study program under each discipline of the School. The School has committed to assist its students in developing the creative thinking, innovative works, and effective organizational leadership skills based on the good foundation in the area of study through innovative learning practices of the School. The School offers collectively three academic programs as follows: Business Administration, Natural Resources and Environmental Management and Logistics and Supply Chain Management.

1. Master of Business Administration Program in Business Administration
2. Master of Science Program in Natural Resources and Environmental Management (International Program)
3. Master of Business Administration Program in Logistics and Supply Chain Management

Master of Business Administration Program in Business Administration

M.B.A. (Business Administration)

This program aims which to enhance and expand knowledge of modern administration and management techniques which to enable organizations to cope with social, political, economic and technological changes of the present day. This program is available in three study-plans.

Plan A(1): This plan requires students to take a non credit course in research seminar or other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan A(2) (English Program): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Plan B: For this plan, students have to fulfill credits for core courses and electives as required by the curriculum and have to pass a comprehensive examination administered by the university.

Master of Science Program in Natural Resources and Environmental Management (International Program)

M.Sc. (Natural Resources and Environmental Management)

The Master of Science in Natural Resources and Environmental Management is designed to develop human resources aimed at devising effective and relevant approaches to solving complex problems in natural resources and environmental management (NREM). The program, in particular, will contribute to the comprehensive design of NREM policy and planning, which covers Thailand and its neighboring countries with similar environments, in the Greater Mekong Sub-region (GMS).

The courses comprehensively cover fundamental concepts of NREM, as well as more specialized-subject areas of study: Physical-Biological Sciences, Social Sciences, and Technical Research Methodologies. Teaching materials will utilize various sources of public information and personnel, including debates, panel discussions and other foray to review published articles with controversial environmental issues raised by various concerned groups of academics, social critics, world leaders, and NGOs. Distinguished guest speakers from several relevant organizations are invited to share their experiences. This approach ensures that (i) students fully appreciate the different points of view on the issues, hence being open-minded and impartial in understanding them, and (ii) then, are better placed to conduct research for designing rational policies and devise impartial problem-solving procedures for issues relating to NREM in the context of sustainable development in the GMS. This program is available in three study plans.

Plan A(1): This plan requires students to take a non credit course in research seminar or other non-credit courses as the school deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan A(2) : This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Plan B: For this plan, students have to fulfill credits for core courses and electives as required by the curriculum and have to pass a comprehensive examination administered by the university.

Master of Business Administration Program in Logistics and Supply Chain Management

M.B.A. (Logistics and Supply Chain Management)

Globalization and recent international cooperation such as free trade agreement, have transformed the way that businesses trade and invest dramatically. The domestic firms have been increasingly exposed to international rivals which results in the significant increase in the degree of competition in both local and global market. Thus, the possibility that firms can enjoy thick margin is no longer viable. Fierce competition forces companies to search for tools that can potentially assist them to build up their competitiveness. It has recently been proved that managing logistics and supply chain effectively and efficiently help the organizations to create their competitiveness in terms of both costs and services. Logistics and supply chain management is now recognized as a powerful and crucial tool in doing businesses. In Thailand, the interest in logistics and supply chain management continues to grow in both public and private sectors. Publicly, the government agencies aim to increase the country's logistic capabilities to match with neighboring countries and to ultimately become the logistics centre of this region. To achieve such goals, Thai government promotes projects on both macro and micro perspectives such as e-port, new trade lanes, and road network optimization.

In the private sector, because firms and businesses have turned into logistics and supply chain management in order to form their competitive advantages, the demand for workforce in this particular area has also been escalating constantly. Therefore, Mae Fah Luang University has seen the great opportunity to establish this program in order to fulfil such shortage of skilled human capital in this area in particular. This program is available in three study plans.

Plan A (1): This plan requires students to take a non credit course in research seminar or other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan A (2) : This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Plan B: For this plan, students have to fulfill Credits for core courses and electives as required by the curriculum and have to pass a comprehensive examination administered by the university.



Master of Business Administration Program in Business Administration

M.B.A. (Business Administration)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	36	Credits
3. Plan B	45	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	36	Credits
Major Required Courses	18	Credits
Thesis	18	Credits
3. Plan B	45	Credits
Foundation Courses	0	Credits
Core Courses	30	Credits
Major Required Courses	6	Credits
Major Elective Courses	6	Credits
Independent Study	3	Credits

Course Requirements

1. Plan A(1)

1203802 Thesis

36 Credits

Cr (Le-Pr-SS)*

36 (0-108-36)

2. Plan A(2) English Program

36 Credits

Major Required Courses

18 Credits

Cr (Le-Pr-SS)

1203704 Research Methodology in Business Administration
1203705 Asian Economy
1203712 Financial Management
1203721 Marketing Management
1203742 Processes of Management
1203836 Seminar on Business Administration

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

Thesis

18 Credits

Cr (Le-Pr-SS)

18 (0-54-18)

1203803 Thesis

3. Plan B

45 Credits

Foundation Courses

Cr (Le-Pr-SS)

1201711 Financial Accounting
1203703 Fundamental and Theory of Management

0 (3-0-6)

0 (3-0-6)

Core Courses

30 Credits

Cr (Le-Pr-SS)

1201712 Managerial Accounting
1202711 Managerial Economics
1203702 Business Research
1203712 Financial Management
1203721 Marketing Management
1203742 Processes of Management
1203752 Quantitative Analysis for Management
1203772 Contemporary Management Information Systems
1203837 Strategic Management in the Global Environment
1203851 Technology and Operations Management

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

Major Required Courses

6 Credits

Cr (Le-Pr-SS)

1203832 Entrepreneurship and Business Ventures
1203853 Logistics and Supply Chain Management
1203854 Regional Study

3 (3-0-6)

3 (3-0-6)

0 (1-3-3)

Major Elective Courses

6 Credits

Cr (Le-Pr-SS)

1203834 Futurology for Executives
1203835 Ethics and Business Environments
1203836 Seminar on Business Administration
1203838 Business Negotiation
1203861 International Business Management
1203862 Cross Cultural Management
1203863 Border Trade Management
1205811 Hospitality Management

3 (3-0-6)

3 (3-0-9)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

3 (3-0-6)

Independent Study

3 Credits

Cr (Le-Pr-SS)

1203801 Independent Study

3 (3-0-6)



Master of Business Administration Program in Logistics and Supply Chain Management

M.B.A. (Logistics and Supply Chain Management)

Curriculum

1. Plan A(1)	39	Credits
2. Plan A(2)	39	Credits
3. Plan B	39	Credits

Curriculum Structure

1. Plan A(1)	39	Credits
Thesis	39	Credits
2. Plan A(2)	39	Credits
Major Required Courses	21	Credits
Major Elective Courses	6	Credits
Thesis	12	Credits
3. Plan B	39	Credits
Major Required Courses	21	Credits
Major Elective Courses	12	Credits
Independent Study	6	Credits

Course Requirements

1. Plan A(1)	39	Credits
1209808 Thesis	Cr(Le-Pr-SS)*	
	39 (0-117-39)	
2. Plan A(2)	39	Credits
Major Required Courses	21	Credits
	Cr(Le-Pr-SS)	
1203704 Research Methodology in Business Administration	3 (3-0-6)	
1203752 Quantitative Analysis for Management	3 (3-0-6)	
1209701 Introduction to Logistics and Supply chain Management	3 (3-0-6)	
1209702 Logistics Laws 1	3 (3-0-6)	
1209703 Strategy and Supply Chain Management	3 (3-0-6)	
1209801 Seminar in Logistics and Supply Chain Management	3 (3-0-6)	
1209802 Logistics System	3 (3-0-6)	
Major Elective Courses	6	Credits
	Cr(Le-Pr-SS)	
1203835 Ethics and Business Environments	3 (3-0-6)	
1203861 International Business Management	3 (3-0-6)	
1203862 Cross Cultural Management	3 (3-0-6)	
1203863 Border Trade Management	3 (3-0-6)	
1209704 International Freight Transport	3 (3-0-6)	
1209705 Inventory and Distribution Center Management	3 (3-0-6)	
1209706 International Logistics and Supply Chain Management	3 (3-0-6)	
1209707 Reverse Logistics and Return Management	3 (3-0-6)	
1209708 Technology and Information System for Logistics and Supply Chain Management	3 (3-0-6)	
1209803 Logistics Laws 2	3 (3-0-6)	
1209804 Procurement and Supply Management	3 (3-0-6)	
1209805 Performance Measurement in Logistics and Supply Chain	3 (3-0-6)	
1209806 Customer Relationship Management	3 (3-0-6)	
1209807 Seminar in Logistics Laws	3 (3-0-6)	
1209811 Special Topics in Logistics and Supply Chain Management	3 (3-0-6)	
Thesis	12	Credits
	Cr(Le-Pr-SS)	
1209809 Thesis	12 (0-36-12)	

3. Plan B**Major Required Courses**

1203704	Research Methodology in Business Administration	39 Credits
1203752	Quantitative Analysis for Management	21 Credits
1209701	Introduction to Logistics and Supply chain Management	Cr(Le-Pr-SS)
1209702	Logistics Laws 1	3 (3-0-6)
1209703	Strategy and Supply Chain Management	3 (3-0-6)
1209801	Seminar in Logistics and Supply Chain Management	3 (3-0-6)
1209802	Logistics System	3 (3-0-6)

Major Elective Courses

1203835	Ethics and Business Environments	12 Credits
1203861	International Business Management	Cr(Le-Pr-SS)
1203862	Cross Cultural Management	3 (3-0-6)
1203863	Border Trade Management	3 (3-0-6)
1209704	International Freight Transport	3 (3-0-6)
1209705	Inventory and Distribution Center Management	3 (3-0-6)
1209706	International Logistics and Supply Chain Management	3 (3-0-6)
1209707	Reverse Logistics and Return Management	3 (3-0-6)
1209708	Technology and Information System for Logistics and Supply Chain Management	3 (3-0-6)
1209803	Logistics Laws 2	3 (3-0-6)
1209804	Procurement and Supply Management	3 (3-0-6)
1209805	Performance Measurement in Logistics and Supply Chain	3 (3-0-6)
1209806	Customer Relationship Management	3 (3-0-6)
1209807	Seminar in Logistics Laws	3 (3-0-6)
1209811	Special Topics in Logistics and Supply Chain Management	3 (3-0-6)

Independent study

1209810	Independent Study	6 Credits
		Cr(Le-Pr-SS)
		6 (0-18-6)


Master of Science Program in Natural Resources and Environmental Management (International Program)

M.Sc. (Natural Resources and Environmental Management)

Curriculum

1. Plan A(1)	36 Credits
2. Plan A(2)	36 Credits
3. Plan B	36 Credits

Curriculum Structure

1. Plan A(1)	36 Credits
Thesis	36 Credits

2. Plan A(2)	36 Credits
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Major Required Courses	11 Credits
Major Elective Courses	12 Credits
Seminar	1 Credits
Thesis	12 Credits

3. Plan B	36 Credits
Major Required Courses	11 Credits
Major Elective Courses	20 Credits
Seminar	1 Credits
Independent Study	4 Credits

Course Requirements

1. Plan A(1)

1208851 Thesis

36 Credits
Cr(Le-Pr-SS)
36 (0-108-36)

2. Plan A(2)

Major Required Courses

1208837	Sustainable Economic Development and Conservation	3 (3-0-6)
1208802	Natural Resources and Environmental Systems, and their Dynamics	3 (3-0-6)
1208838	Ecosystem Form and Function, and Biodiversity Conservation	3 (3-0-6)
1208839	Socio-economic and Environmental Impact Assessment and Risk Management	3 (3-0-6)
1208840	Regulations, Policy and Planning for Natural Resources and the Environment	3 (3-0-6)

36 Credits
21 Credits
Cr(Le-Pr-SS)

Major Elective Courses

1208842	Soil, Water, and Nutrient Management	3 (3-0-6)
1208843	Forestry and Forest Management	3 (3-0-6)
1208844	Water Resources Management	3 (3-0-6)
1208845	Ecosystem Dynamics	3 (3-0-6)
1208846	Clean Technologies	3 (3-0-6)
1208847	Natural Resource and Environmental Economics	3 (3-0-6)
1208848	Environmental Management in the Private Sector	3 (3-0-6)
1208849	Society and Natural Resources	3 (3-0-6)
1208850	Policy Formulation for Natural Resources and Environmental Management	3 (3-0-6)
1208853	Social Sciences Research Methods	3 (3-0-6)
1208854	Data Collection and Analysis for Natural Resources and Environmental Management	3 (3-0-6)
1208855	Spatial Information Systems for Natural Resources and Environmental Management	3 (3-0-6)
1208856	Environmental Decision Making	3 (3-0-6)
1208857	Dynamic Systems Modeling for NREM Policy Analysis	3 (3-0-6)
1208858	Special Topic 1	3 (3-0-6)
1208859	Special Topic 2	3 (3-0-6)
1208860	Special Topic 3	3 (3-0-6)
1208862	Special Topic 4	3 (3-0-6)
1208863	Special Topic 5	3 (3-0-6)

12 Credits
Cr(Le-Pr-SS)

Thesis and Seminar

1208864	Seminar	3 (3-0-6)
1208852	Thesis	12 (0-36-12)

13 Credits
Cr(Le-Pr-SS)

3. Plan B

Major Required Courses

1208802	Natural Resources and Environmental Systems, and their Dynamics	3 (3-0-6)
1208837	Sustainable Economic Development and Conservation	3 (3-0-6)
1208838	Ecosystem Form and Function, and Biodiversity Conservation	3 (3-0-6)
1208839	Socio-economic and Environmental Impact Assessment and Risk Management	3 (3-0-6)
1208840	Regulations, Policy and Planning for Natural Resources and the Environment	3 (3-0-6)

36 Credits
21 Credits
Cr(Le-Pr-SS)

Major Elective Courses

		12 Credits
		Cr(Le-Pr-SS)
1208842	Soil, Water, and Nutrient Management	3 (3-0-6)
1208843	Forestry and Forest Management	3 (3-0-6)
1208844	Water Resources Management	3 (3-0-6)
1208845	Ecosystem Dynamics	3 (3-0-6)
1208846	Clean Technologies	3 (3-0-6)
1208847	Natural Resource and Environmental Economics	3 (3-0-6)
1208848	Environmental Management in the Private Sector	3 (3-0-6)
1208849	Society and Natural Resources	3 (3-0-6)
1208850	Policy Formulation for Natural Resources and Environmental Management	3 (3-0-6)
1208853	Social Sciences Research Methods	3 (3-0-6)
1208854	Data Collection and Analysis for Natural Resources and Environmental Management	3 (3-0-6)
1208855	Spatial Information Systems for Natural Resources and Environmental Management	3 (3-0-6)
1208856	Environmental Decision Making	3 (3-0-6)
1208857	Dynamic Systems Modeling for NREM Policy Analysis	3 (3-0-6)
1208858	Special Topic 1	3 (3-0-6)
1208859	Special Topic 2	3 (3-0-6)
1208860	Special Topic 3	3 (3-0-6)
1208862	Special Topic 4	3 (3-0-6)
1208863	Special Topic 5	3 (3-0-6)
1208864	Seminar	3 (3-0-6)

Independent Study

		3 Credits
		Cr(Le-Pr-SS)
1208865	Independent Study	3 (0-9-3)

* Cr : Credits
Le : Lecture
Pr : Practice
SS : Self Study

Descriptions ::

School of Management

1201711 Financial Accounting **0(3-0-6)**
Study fundamental accounting concepts and financial reports, recording of accounting transactions, recognition of revenue, cost of goods sold and inventory, fixed assets and depreciation, liabilities and owners' equities, time-different in calculating taxes, cash flow and fund flow statements, data contained in annual reports and financial analysis.

1201712 Managerial Accounting **3(3-0-6)**
Characteristics of managerial accounting. Cost behavior, cost, volume, and profit relationship. Total cost, variable cost, standard cost, and analysis of differential production cost. Using accounting information for making decision and controlling. Responsible accounting, budgeting, reporting and performance analysis.

1202711 Managerial Economics **3(3-0-6)**
Application of economic principles and economics concepts to managerial decision making. Topics include: marketing equilibrium, risk analysis, demand estimation, production estimation and cost analysis, market structure and their relation to pricing, business forecasting, and the role of external impact on the economy.

1203702 Business Research **3(3-0-6)**
Concept and research methodology in social science; Statistic for research; Research design; Relevancy of research outputs to business strategic planning, management, and development.

1203703 Fundamental and Theory of Management **0(3-0-6)**
Concept of contemporary management; Theory of management; Principle of marketing, economic, strategic management, production and operation management, management information system.

1203704 Research Methodology in Business Administration **3(3-0-6)**
Study of processes of research and methodology which includes research tools used to aid business decision making. It is to consider definition of research problems, research processes, selection of projects, and business research. The course emphasizes on the analysis and application of data in business decision making.

1203705 Asian Economy **3(3-0-6)**
Aims to study the major economies and markets of Asian Countries. This course also covers the economic system, history, politics, and international relations of Asian countries. Some attention is paid also to their trade and investment relationships with each other and to other countries. Development patterns among the rapidly industrializing economies are discussed with attention to specific issues raised for country-members in trade policy in the region.

1203712 Financial Management **3(3-0-6)**
Study of financial management and financial management techniques for administrators of organizations. Emphasis is on financial planning and control. The course explores the fundamental nature of the corporate finance function and the conceptual and theoretical underpinnings of tools for successful financial management and the handling of financial decision-making situations. Topics include: capital budgeting, capital markets and securities, risk, return and diversification, valuation, cost of capital, capital structure, retained earning policy, risk management and the consolidation of businesses.

1203721 Marketing Management **3(3-0-6)**
Covers the concept of Marketing and its environment as a philosophy of doing business successfully and hence has relevance to all organizations. It looks at all aspects of marketing management: customer focus, relationship marketing, monitoring the environment, buyer behavior, marketing research, marketing planning, segmenting, targeting and positioning, the marketing mix, new product development and competitive strategy.

- 1203742 Processes of Management 3(3-0-6)**
Examines the principles and practices of the management of organizations. It considers the changing environments of organizations, issues of social responsibility, the key management functions, communication and interpersonal skills, leadership, the management of change and international management.
- 1203752 Quantitative Analysis for Management 3(3-0-6)**
Relationship between Management Science and Decision Making Processes; Methodology in Quantitative Analysis; Mathematical Models and application to business; problems and current Issues.
- 1203801 Independent Study 3(3-0-6)**
To apply all understanding in theoretical concepts about business administration and management with the business environment in order to search for a high potential business, presenting in the form of project feasibility study including with a practical business plan.
- 1203802 Thesis 36(0-108-36)**
The thesis provides students with the opportunity to undertake an original research project in business and administration.
- 1203803 Thesis 18(0-54-18)**
The thesis provides students with the opportunity to undertake an original research project in business and administration.
- 1203832 Entrepreneurship and Business Ventures 3(3-0-6)**
The design and evaluation of new ventures; exploring the many dimensions of new venture creation and growth and to foster innovation and new business formulations in independent and corporate settings which includes threats and opportunities analysis of entrepreneurs; business feasibility; finding source of fund and etc.; initiation and the application of writing an actual business plan.
- 1203834 Futurology for Executives 3(3-0-6)**
Concept of future change; effect of change to economy; social; politic; management; human relation; and its repercussion to business environment.
- 1203835 Ethics and Business Environments 3(3-0-6)**
Concept of business environment; stakeholder; ethical management; social responsibility.
- 1203836 Seminar on Business Administration 3(3-0-6)**
An in-depth seminar focusing on contemporary issues in business administration. Analyses of selected topics may include management, business policy, administrative situations, the international business environment, and business ethics.
- 1203837 Strategic Management in the Global Environment 3(3-0-6)**
The idea and strategic management process, analysis the external/internal environment, strategic planning, strategic control, the decision to choose the strategic and method emphasizing cases study and business model.
- 1203838 Business Negotiation 3(3-0-6)**
Deal making and dispute resolution in the context of business transaction with a special emphasis on method, style, practice and business writing for handling with conflicts.
- 1203851 Technology and Operations Management 3(3-0-6)**
Management of operation units in industry; strategy; forecasting; operation processes; inventory; quality assurance and control; production management under uncertainties.
- 1203853 Logistics and Supply Chain Management 3(3-0-6)**
Study management and strategic planning of organization transport system by using basic concepts of logistics process and supply chain flow; time and cost limitations; roles of product distribution in customer service improvement; evaluations of product distribution system; information technology applications for product distribution.

- 1203854 Regional Study** **0(1-3-3)**
Study trip emphasize on economic, politic, social, technology, business investment, and regional culture.
- 1203861 International Business Management** **3(3-0-6)**
Concept and analysis of international business and environment, international firm; Organizational strategy, marketing, finance, and management in international business.
- 1203862 Cross Cultural Management** **3(3-0-6)**
Cross cultural business strategies; Influences of cultural, politics, economic and social on international business management; Effects of environmental differences among international business.
- 1203863 Border Trade Management** **3(3-0-6)**
Concept, roles, and importance of border trade; Potential, problem and obstacle in border trading; Strategic planning; Case study.
- 1205811 Hospitality Management** **3(3-0-6)**
Concept, roles, and importance of hospitality industry. Components of hospitality industry, environment and marketing characteristic of hospitality industry including tourism industry. Change and development of tourism, relation to other business, and technology. Strategic management of tourism industry.
- 1208802 Natural Resources and Environmental Systems, and their Dynamics** **3(3-0-6)**
Importance of natural resources in the context of environmental systems; dynamic interactions among the key components soil, water, and air; natural resources in national/regional economies, relationships with the environment; trans-boundary issues.
- 1208816 Special Topic in Physical and Biological Sciences** **3(3-0-6)**
In-depth study offered to a specific group of students as an elective for the physical and biological sciences.
- 1208837 Sustainable Economic Development and Conservation** **3(3-0-6)**
Concepts of sustainable development; environmental conventions; importance of conservation in the pursuit of sustainability; assessment of sustainability; use of indicators in the evaluation of sustainability.
- 1208838 Ecosystem Form and Function, and Biodiversity Conservation** **3(3-0-6)**
Structure and properties of ecosystems, with emphasis on terrestrial environments, ecosystem function and the impact of man; the concept of ecosystem services; introduction to ecosystem management based on form and function analysis; biodiversity and its conservation.
- 1208839 Socio-economic and Environmental Impact Assessment and Risk Management** **3(3-0-6)**
Socio-economic and environmental impact assessment for soil, water, and air resources; urbanization, industrialization, and land intensification considerations; risk assessment methodologies; trans-boundary issues, particularly for combined effects of impact.
- 1208840 Regulations, Policy and Planning for Natural Resources and the Environment** **3(3-0-6)**
Development and implementation of environmental regulations; effective approaches to pollution abatement from various sources; techniques for predicting the impact of emissions; policy and planning, and implementation strategies for regulation; trans-boundary issues.
- 1208842 Soil, Water, and Nutrient Management** **3(3-0-6)**
Basic properties of soils, characteristics of waters, and positive and negative effects of nutrients in natural and man-managed ecosystems; strategies for integrated soil, water, and nutrient management for sustainable agricultural development.

- 1208843 Forestry and Forest Management 3(3-0-6)**
Forestry for conservation and production; forest types and structure; principles of forest management; forestry and forest management in Southeast Asia; importance to national economies and the environment in various countries.
- 1208844 Water Resources Management 3(3-0-6)**
Types and origin of freshwater resources; understanding dynamics as a basis for water resources management; water resources management in agricultural development; impact of man on surface and ground waters; eutrophication and pollution abatement.
- 1208845 Ecosystem Dynamics 3(3-0-6)**
Changes in ecosystem properties and function; quantification of changes; impact of global change, including climate and land-use changes, on ecosystem dynamics; other effects of man on ecosystems; conservation of biodiversity.
- 1208846 Cleaner Technologies 3(3-0-6)**
Concepts of cleaner technology; degradation of pollutants in terrestrial environments; use of microorganisms to accelerate degradation; clean technologies for water and air pollution control; role of clean technologies in industry; conservation of biodiversity .
- 1208847 Natural Resource and Environmental Economics 3(3-0-6)**
Resource economic theories and concepts applied to non-renewable and renewable resources; policy design and implementation; environmental policies for protection, regulation, and pollution control; prospects for regional and international cooperation.
- 1208848 Environmental Management in the Private Sector 3(3-0-6)**
Environmental regulations, social systems, and business; reducing environmental impact and creating win-win situations; technological processes for environmental damage reversal; changing local, regional, and international perspectives.
- 1208849 Society and Natural Resources 3(3-0-6)**
Relationships between society and natural resources; inter-relationships among people and institutions regarding values and natural resources; comparative studies of conceptual and theoretical models relating to society and natural resources.
- 1208850 Policy Formulation for Natural Resources and Environmental Management 3(3-0-6)**
Integrated methods for developing solutions to problems in natural resources and environmental policy and management; methods for problem identification and resolution; exposure to common and trans-boundary problems in the GMS.
- 1208853 Social Science Research Methods 3(3-0-6)**
A survey of available theoretical and practical approaches; relationships between choices over methodology for data collection, and results analysis; qualitative and quantitative efforts to address complex social phenomena.
- 1208854 Data Collection and Analysis for Natural Resources and Environmental Management 3(3-0-6)**
Data collection and sampling methods; organization of data as a prerequisite for analysis; types of statistical analysis, including statistical inference, multivariate analysis, and factor analysis.
- 1208855 Spatial Information Systems for Natural Resources and Environmental Management 3(3-0-6)**
Concepts involved in spatial information systems; use of Geographical Information Systems (GIS) for data handling; linking GIS with other methodologies, e.g., the Agro-ecological Zone concept of the Food and Agriculture Organization.
- 1208856 Environmental Decision Making 3(3-0-6)**
Decision and systems analysis; modeling as a tool for understanding design, operation, and impact of a system; quantitative methods for analyzing uncertainty and multiple, conflicting objectives; cost allocation and trans-boundary issues.

- 1208858 Dynamic Systems Modeling for NREM Policy Analysis 3(3-0-6)**
 Natural resources and the environment as dynamic systems, dynamic system modeling, environmental system structures and their associated behaviors over time, systems modeling and analysis for policy design; policy scenario simulations, system dynamics and sustainable development .
- 1208859 Special 1 3(3-0-6)**
 In-depth study offered to a specific group of students as electives in the quantitative research methods.
- 1208860 Special 2 3(3-0-6)**
 In-depth study offered to a specific group of students as electives in the quantitative research methods.
- 1208861 Special 3 3(3-0-6)**
 In-depth study offered to a specific group of students as electives in the quantitative research methods.
- 1208862 Special 4 3(3-0-6)**
 In-depth study offered to a specific group of students as electives in the quantitative research methods.
- 1208863 Special 5 3(3-0-6)**
 In-depth study offered to a specific group of students as electives in the quantitative research methods.
- 1208841 Seminar 3(3-0-6)**
 Will include presentations by students, university staff, and guest speakers from various organizations relevant to the program objectives and content .
- 1208851 Thesis 36(0-108-36)**
 Extensive research on an appropriate topic, which will provide training in data acquisition, analysis, interpretation, and presentation. This will be co-supervised by staff from Mae Fah Luang University and external institutions.
- 1208852 Thesis 12(0-36-12)**
 Research on an appropriate topic, which will provide training in data acquisition, analysis, interpretation, and presentation. This will be co-supervised by staff from Mae Fah Luang University and external institutions.
- 1208865 Independent Study 3(0-9-3)**
 Independent research on an appropriate topic with a literature review and application to a case study, and presentation.
- 1209701 Introduction to Logistics and Supply Chain Management 3(3-0-6)**
 Introduction to primary terms and core concepts in logistics and supply chain contexts; concepts, principles, and techniques for managing logistics and supply chain; examples of problems solving in logistics and supply chain environment; advantages of integrated supply chain system in terms of costs and efficiencies; trends and future of logistics and supply chain management; other related topics.
- 1209702 Logistics Laws 1 3(3-0-6)**
 Concepts and conducts of introducing laws to apply with logistics and supply chain businesses; domestic laws that related to logistics and supply chain business; emphasis laws and regulations about various transportation by sea, air and land transportation; laws related tax; laws and regulations related customs; investment promotion laws; insurance and agent laws.

1209703 Strategy and Supply Chain Management 3(3-0-6)

Strategies and concepts used to design supply chain system for developing supply chain competitive advantages; customer relationship strategies; demand management strategies; inventory strategies; transport strategies; sourcing strategies; performance measurement strategies; risk management strategies; technology and information management strategies; traceability strategies; collaboration strategies; other related topics.

1209704 International Freight Transport 3(3-0-6)

Topics that related to freight transport businesses in provider perspectives including freight operation management; trade facilitation; transport asset management for asset-based providers; containerization; demand management for freight transport; transport business structure for road, maritime, and air transport; opportunities and obstacles and future business environments in doing international freight transport business by modes of transport; related issues.

1209705 Inventory and Distribution Center Management 3(3-0-6)

Managing inventories and types of distribution center; determination distribution center locations; distribution center design; distribution center management by product types; roles of distribution center in inventory management as well as logistics and supply chain management; performance measurement in inventory and distribution center management; technology and information management for managing inventories and distribution center; customer demand and inventory management; other related issues.

1209706 International Logistics and Supply Chain Management 3 (3-0-6)

Trends and future of international economic; current and expected factors influencing international investment and market; concepts, theories, and principle of logistics and supply chain management for creating both cost and value advantages in international markets; logistics.

1209707 Reverse Logistics and Return Management 3(3-0-6)

Standards, regulations, and laws that related to return products and environmental policies; concepts, theories, and real world examples of managing waste, under-standard, and return products in supply chains in terms of costs and system management; reverse logistics planning and environmental issues; impacts of laws and regulations on reverse logistics and logistics network; other related topics.

1209708 Technology and Information System for Logistics and Supply 3(3-0-6)

Technology, information, and application management for managing logistics and supply chain systems; limitations of technology and information management; future trends of technology and information management in logistics and supply chain systems; real world examples and cases in managing technology and information for logistics and supply chain systems.

1209801 Seminar in Logistics and Supply Chain Management 3(3-0-6)

To debate, analyze, and present issues related to logistics and supply chain management or other related topics.

1209802 Logistics System 3(3-0-6)

Techniques for managing logistics, customer services, procurements, distribution centers, inventories and customer demand, optimal routes, distribution centers and networks; safety logistics; related technology and information management for logistics system; techniques for adding value and lowering non-value added activities along logistics system; outsourcing logistics systems; performance measurement; bullwhip effect; other related topics.

1209803 Logistics Laws 2 3(3-0-6)

Study international laws that related to Thai and international's logistics and supply chain business; trends of laws that related to logistics and supply chain in Thailand; methods and techniques for drafting contracts that related to logistics and supply chain businesses; alternative dispute resolutions; legal status and importance of various transport documents; other related issues.

1209804 Procurement and Supply Management**3(3-0-6)**

Concepts, principles, and strategies of procurement and supply management; procurement planning; procurement process management; supplier selection; demand management; procurement cost management; supplier relationship management; supply and inventory management; supply and transportation management; technology and information management for procurement; legal aspects for procurement; future trends for procurement and supply management; international supply management; public procurement; other related issues.

1209805 Performance Measurement in Logistics and Supply Chain**3(3-0-6)**

Concepts, theories, principles, and tools in developing metrics and measures for logistics and supply chain performance measurement with understanding the nature of managing change and customer service ; advantages and limitations of performance measurement; other related topics.

1209806 Customer Relationship Management**3(3-0-6)**

Concepts, principles, and theories of customer relationship management and corporate communication management; importance of CRM; CRM and supply chain management; customer portfolio analysis; customer life cycle management; complaint and feedback management; technology and information management for CRM; measurements for customer service level; customer contact center management; strategies for customer relationship building; the innovative CRM organization; future trends for CRM; other related topics.

1209807 Seminar in Logistics Laws**3(3-0-6)**

To debate, analyze and present legal problems and obstructions that related to logistics and supply chain management; analyze related-logistics and supply chain proposals proposed by various countries on legal aspects.

1209808 Thesis**39(0-117-39)**

Students are required to research and study in one particular topic in logistics and supply chain contexts or related topics under careful advices of an advisor and conclude the ideas from study and research to write a thesis.

1209809 Thesis**12(0-36-12)**

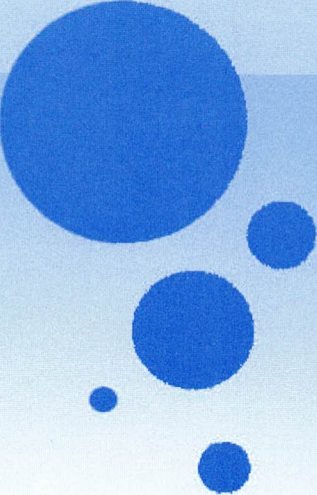
Students are required to research and study in one particular topic in logistics and supply chain contexts or related topics under careful advices of an advisor and conclude the ideas from study and research to write a thesis.

1209810 Independent Study**6(0-18-6)**

To apply knowledge, concepts, theories, principles, and understanding in logistic and supply chain with business issues or problems in order to effectively solve or improve such conditions and environments or to propose a potential business project by conducting corresponding project feasibility together with propose a practical business plan.

1209811 Special Topics in Logistics and Supply Chain Management**3(3-0-6)**

Special topics that related to logistics and supply chain management such as agricultural logistics, green supply chain, and waste logistics.



School of Law

» Master of Laws Program (Teaching In Thai Language)

Master Program

School of Law

Mae Fah Luang University

The school of Law was established in January 23, 2003 and began enrullment in the same year under the response for the needs of people to studied law. After the first year, the school successfully established a standard program with gifted staff dedicated to the creative of quality graduate students capable of utilizing knowledge of the legal prefession with professional and moral ethics. MFU school of Law continues to exel in quality creating that graduates that exceed and surpass expectations.

Master of Laws Program (Teaching in Thai Language) LL.M.

Designed to respond to society's need for personnel with knowledge and expertise in jurisprudence. This program will offer you intellectual challenge, the opportunity to study alongside top lecture from around Thailand. Students will also acquire valuable transferable skills for their future career. This program is available in two study-plans.

Plan A (2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Plan B: For this plan, students have to fulfill Credits for core courses and electives as required by the curriculum and have to pass a comprehensive examination administered by the university.



Master of Laws Program LL.M.

Curriculum

1. Plan A(2)	39	Credits
2. Plan B	45	Credits

Curriculum Structure

1. Plan A(2)	39	Credits
Major Required Courses	9	Credits
Major Elective Courses	15	Credits
Thesis	15	Credits
2. Plan B	36	Credits
Major Required Courses	9	Credits
Major Elective Courses	24	Credits
Independent Study	6	Credits

Course Requirements

1. Plan A(2)	39	Credits
Foundation Required Courses		
	Cr(Le-Pr-SS)	
1602701 English Comprehension for Legal Research	0 (3-0-6)	
1602702 Legal Research Methodology	0 (3-0-6)	

Major Required Courses

9	Credits
Cr(Le-Pr-SS)*	
3	(3-0-0)
3	(3-0-0)
3	(3-0-0)

1602710	Advanced Criminal Law
1602730	Advanced Public Law
1602833	Theory and Principle of Civil Law

Major Elective Courses

15	Credits
Cr(Le-Pr-SS)*	

1602711	Criminal Justice Administration	3 (3-0-0)
1602712	Advanced Criminology	3 (3-0-0)
1602713	Business Crime	3 (3-0-0)
1602731	Advanced Administrative Law	3 (3-0-0)
1602732	Advanced Electoral and Parliamentary Law	3 (3-0-0)
1602733	Law on Administrative Structure	3 (3-0-0)
1602734	Public Economic Law	3 (3-0-0)
1602735	Law on Public Services	3 (3-0-0)
1602736	Advanced Public Finance Law	3 (3-0-0)
1602812	Advanced Electoral and Parliamentary Law	3 (3-0-0)
1602720	Advanced Business Law	3 (3-0-0)
1602721	Law on Business Organizations	3 (3-0-0)
1602722	Law on Business Planning	3 (3-0-0)
1602723	Law on Intellectual Property	3 (3-0-0)
1602724	Investment Law	3 (3-0-0)
1602725	Comparative Commercial Law	3 (3-0-0)
1602726	Principles of Negotiation and Business Contract Drafting	3 (3-0-0)
1602727	International Business Law	3 (3-0-0)
1602728	Theory of the Relationship between Law and Business	3 (3-0-0)
1602804	Information Technology Law	3 (3-0-0)
1602823	International Carriage Law	3 (3-0-0)
1602825	Law on Investment in Natural Resources	3 (3-0-0)
1602826	Law of International Trade in Services	3 (3-0-0)
1602828	Advanced Insurance Law	3 (3-0-0)
1602831	Advance Tax Law	3 (3-0-0)
1602832	Bankruptcy and Business Reorganization	3 (3-0-0)

1602714	International Criminal Law	3 (3-0-0)
1602806	Law on Regional Organizations	3 (3-0-0)
1602807	Legal Systems in ASEAN	3 (3-0-0)
1602822	Rules on Conflict of Laws	3 (3-0-0)
1602824	Law on International Financing to Developing Countries	3 (3-0-0)
1602829	International Contract	3 (3-0-0)
1602830	International Economic Law	3 (3-0-0)
1602835	International Commercial Law	3 (3-0-0)
1602837	Air Law	3 (3-0-0)
1602715	Advanced Criminal Procedure	3 (3-0-0)
1602809	Alternative Dispute Resolution	3 (3-0-0)
1602820	Comparative Bankruptcy Law	3 (3-0-0)
1602834	Advanced Law on Evidence	3 (3-0-0)
1602836	Advanced Civil Procedural Law	3 (3-0-0)
1602801	Legal Philosophy	3 (3-0-0)
1602802	Comparative Law and Major Legal Systems of the world	3 (3-0-0)
1602803	Chinese Legal System	3 (3-0-0)
1602805	Human Rights Law	3 (3-0-0)
1602808	Comparative Family Law	3 (3-0-0)
1602810	Space Law	3 (3-0-0)
1602811	Juvenile and Family Justice	3 (3-0-0)
1602821	Advanced Labor Law	3 (3-0-0)
1602827	Economic Analysis of Law	3 (3-0-0)

Thesis

1602891	Thesis	15 Credits Cr (Le-Pr-SS)* 15 (0-15-0)
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2. Plan B**39 Credits**

1602701	English Comprehension for Legal Research	0 (3-0-6)
1602702	Legal Research Methodology	0 (3-0-6)

Major Required Courses**9 Credits**
Cr (Le-Pr-SS)

1602710	Advanced Criminal Law	3 (3-0-6)
1602730	Advanced Public Law	3 (3-0-6)
1602833	Theory and Principle of Civil Law	3 (3-0-6)

Major Elective Courses**24 Credits**
Cr (Le-Pr-SS)

1602723	Law on Intellectual Property	3 (3-0-6)
1602725	Comparative Commercial Law	3 (3-0-6)
1602820	Comparative Bankruptcy Law	3 (3-0-6)
1602711	Criminal Justice Administration	3 (3-0-6)
1602712	Advanced Criminology	3 (3-0-6)
1602713	Business Crime	3 (3-0-6)
1602731	Advanced Administrative Law	3 (3-0-6)
1602732	Advanced Electoral and Parliamentary Law	3 (3-0-6)
1602733	Law on Administrative Structure	3 (3-0-6)
1602734	Public Economic Law	3 (3-0-6)
1602735	Law on Public Services	3 (3-0-6)
1602736	Advanced Public Finance Law	3 (3-0-6)
1602812	Advanced Electoral and Parliamentary Law	3 (3-0-6)
1602720	Advanced Business Law	3 (3-0-6)
1602721	Law on Business Organizations	3 (3-0-6)
1602722	Law on Business Planning	3 (3-0-6)
1602723	Law on Intellectual Property	3 (3-0-6)
1602724	Investment Law	3 (3-0-6)
1602725	Comparative Commercial Law	3 (3-0-6)

1602726	Principles of Negotiation and Business Contract Drafting	3 (3-0-6)
1602727	International Business Law	3 (3-0-6)
1602728	Theory of the Relationship between Law and Business	3 (3-0-6)
1602804	Information Technology Law	3 (3-0-6)
1602823	International Carriage Law	3 (3-0-6)
1602825	Law on Investment in Natural Resources	3 (3-0-6)
1602826	Law of International Trade in Services	3 (3-0-6)
1602828	Advanced Insurance Law	3 (3-0-6)
1602831	Advance Tax Law	3 (3-0-6)
1602832	Bankruptcy and Business Reorganization	3 (3-0-6)
1602714	International Criminal Law	3 (3-0-6)
1602806	Law on Regional Organizations	3 (3-0-6)
1602807	Legal Systems in ASEAN	3 (3-0-6)
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1602801	Legal Philosophy	3 (3-0-6)
1602802	Comparative Law and Major Legal Systems of the world	3 (3-0-6)
1602803	Chinese Legal System	3 (3-0-6)
1602805	Human Rights Law	3 (3-0-6)
1602808	Comparative Family Law	3 (3-0-6)
1602810	Space Law	3 (3-0-6)
1602811	Juvenile and Family Justice	3 (3-0-6)
1602821	Advanced Labor Law	3 (3-0-6)
1602827	Economic Analysis of Law	3 (3-0-6)
Independent Study		6 Credits
1602892	Independent Study	Cr (Le-Pr-SS)
		6 (0-18-6)

* Cr : Credits
 Le : Lecture
 Pr : Practice
 SS : Self Study

Descriptions ::

School of Law

- 1602701 English Comprehension for Legal Research** **0(3-0-6)**
The study of reading comprehension related to law for research, emphasizing the context of words, punctuation, vocabularies, idiom, and grammar to understand legal text.
- 1602702 Legal Research Methodology** **0(3-0-6)**
The principles and method legal research, emphasizing process and methodology which include drafting proposal, qualitative research, quantitative research, analysis and presentation of qualitative and quantitative data, also emphasizing the understanding of hypotheses, and research theory.
- 1602710 Advanced Criminal Law** **3(3-0-6)**
The history and evolution of Criminal Law, the theories related to the criminal responsibility structure of Civil Law and Common Law Countries, the use of Criminal Law, tendency of Criminal Law development in various countries, analysis of the development of the criminal law concept and theories, the relationship between Criminal and Criminal Procedure Law; law enforcement in each country.
- 1602711 Criminal Justice Administration** **3(3-0-6)**
The study of philosophy, history and evolution, including structures and measures of present criminal justice; mechanism and organization related to criminal justice; the present criminal justice development; comparative study between Thai and foreign criminal justice.
- 1602712 Advanced Criminology** **3(3-0-6)**
The theories on criminal cause; the basis for such theories; various kinds of crime; the theories on public protection and on suppression of crime in European countries and America; the change in the aims of punishment as a result of the change in circumstances; relationship between criminology, criminal policies and criminal law.
- 1602713 Business Crime** **3(3-0-6)**
The crimes occurring by business transactions, Business Crime definition, state's measures and mechanisms to address the crimes. Including a business advantage and business crime committed.
- 1602714 International Criminal Law** **3(3-0-6)**
The history and evolution of international criminal law; administration, shape and form of international criminal law; measures and mechanisms for preventing and dealing with crime; definition of aggression, war crimes, genocide, kidnapping, slavery trade and piracy; international cooperation to control such crimes; internal legislative and ratification of international laws including the scope of penalty for the offences.
- 1602715 Advanced Criminal Procedure** **3(3-0-6)**
The history, evolution and philosophy of Thai criminal procedure in each era; relationship between criminal procedure law and protection of person freedoms in Thai society; the role of criminal procedure law in a rapidly changing Thai society. Politically, socially and economically; with emphasis on with the analysis of criminal procedure law.
- 1602720 Advanced Business Law** **3(3-0-6)**
The theories and concepts of Business Law, evolution of business law, the present law concerning business. The study both foreign business law and Thai business law.
- 1602721 Law on Business Organizations** **3(3-0-6)**
The roles of business organization in modern business transactions, emphasizing limited company and joint venture contracts. Theories and legal concepts concerning authority, duties and responsibilities of committee and executive, role of directors and shareholders, relationship between major and minor shareholders, fundraising, and company structures, e.g. holding companies.

1602722 Law on Business Planning**3(3-0-6)**

The study of form and structure of Thai business system; the law related to the establishment and operation of each kind business; tax obligations; tax planning in business; the law related to the business account keeping and other related law.

1602723 Law on Intellectual Property**3(3-0-6)**

The concept and history about intellectual property protection; various kinds of intellectual property, especially patent, copyright and trade mark; international intellectual property; licenses to use intellectual property and franchise contracts.

1602724 Investment Law**3(3-0-6)**

The concepts, policies and laws related to direct investment; protection and promotion of inward and outward investment by host country and home country of investment; bilateral and multilateral investment treaties; major interesting issues pertaining to laws on direct investment.

1602725 Comparative Commercial Law**3(3-0-6)**

The concepts and principles of foreign commercial law, both civil and common law systems on sale, negotiable instrument, partnership, company; compare with Thai concepts and principles.

1602726 Principles of Negotiation and Business Contract Drafting**3(3-0-6)**

The theories, characteristic and legal status of international contracts; the exchange of contract structure when changing direct investment to services investment; contract drafting and review; advantage and disadvantage of developing countries in contract and various enterprises; negotiation concerning international contract; result of international contract; various dispute settlements of conflict arising from interpretation or from breach. The principle of business contract negotiation and drafting, process, planning, issues preparation and negotiation.

1602727 International Business Law**3(3-0-6)**

The principles of commercial export and import regulations, Thai and International laws relating to the transfer technology to developing countries and Transnational company transaction, including international tax systems, international services business, foreign investment, Thai investment in others countries including joint ventures with host countries; bond issuing in foreign private companies, foreign investment by way of both private institutional, and government loans.

1602728 Theory of the Relationship between Law and Business**3(3-0-6)**

The theories concerning the understanding of business problems; multi disciplinary business laws, overview of the relationship between law and classification and business transactions; theories and the determinative role of law on business; fundraising for business transaction, production, marketing and management.

1602730 Advanced Public Law**3(3-0-6)**

The study of theories of constitutional and administrative law; definition and classification of public law; evolution of philosophy and status of public law in various era; concept and evolution of Thai public law. Theories of the state; the use of authority and legitimacy theories and the control of state authority with emphasis on constitutionalism and legal state.

1602731 Advanced Administrative Law**3(3-0-6)**

The study of historical background and nature of administration and administrative law; source, the use of and interpretation of administrative law; administrative structure; the theories of administrative transaction; the legal principle related to administrative contract and the principle of the responsibility of administration; including the legal principle related to personnel and property of administration and the legal principle related to the control of administration.

1602732 Advanced Electoral and Parliamentary Law**3(3-0-6)**

The evolution and form of Thai and foreign parliament; the position of the member of parliament; election systems; election law in Thailand and other countries; power and duty of parliament to establish the law; regulations for parliamentary conference; mechanism and organization of parliamentary system.

- 1602733 Law on Administrative Structure** **3(3-0-6)**
 Basic concepts and the theories of the arrangement of administrative structure; principles of integration and separation of power; theories of legal person in public law; government structure arrangement, regional and local, government organization arrangement specific in problems of administrative structure arrangement.
- 1602734 Public Economic Law** **3(3-0-6)**
 The theories and basic concepts on administrative law pertaining to state intervention, theories of public service; the definition and evolution of Thai state enterprises; the relationship between various public service and models of organization; the administration of public service, the industrial and commercial public service, social and cultural public service, methodology of public service, models and legal status; the problems and obstacles of public services provided by Thai enterprises.
- 1602735 Law on Public Services** **3(3-0-6)**
 The theories and basic concepts on administrative law pertaining to state intervention, theories of public service; the definition and evolution of Thai state enterprises; the relationship between various public service and models of organization; the administration of public service, the industrial and commercial public service, social and cultural public service, methodology of public service, models and legal status; the problems and obstacles of public services provided by Thai enterprises.
- 1602736 Advanced Public Finance Law** **3(3-0-6)**
 The theories and basic concepts of Public Finance Law; the origin of Public Finance Law; government public finance policies; other government finance policies; government organized management in term of public finance, income, public debt and state expenditure. The study of methods and problems for government budget arrangements; the public finance organization and the monitoring of state expenditure; the state money control and the various form of state public finance.
- 1602737 Comparative Administrative Law** **3(3-0-6)**
 The study of theories and concepts in administrative law; elements of administrative law; forms of administrative law; comparison between concepts and forms of Thai administrative law and foreign administrative law such as French, Germany etc.
- 1602801 Legal Philosophy** **3(3-0-6)**
 The principles of Legal Philosophy, comprising definition, character, scope and significance of Legal Philosophy. The relationship between Legal Philosophy and other Legal Science and other branches of general philosophy. The evolution of Legal Philosophy in each era, emphasizing the relationship between general philosophies and social circumstances in each era. The result of that Philosophy in the next Era. The concepts of each school of thought concerning Legal Philosophy. Legal Philosophy in concept of each school emphasis state, law, justice legal power, enforcement, rights, freedom and relationship between cause and result.
- 1602802 Comparative Law and Major Legal Systems of the world** **3(3-0-6)**
 The principles of Comparative Law that consisting of definition, importance of comparative analysis in law, evolution of Comparative Law, concerning of law. The comparison between law and other laws.
- 1602803 Chinese Legal System** **3(3-0-6)**
 The history of Chinese Law, the present role of Chinese Law, Legal concept, public attitude to law, some important laws, the present and trends of Chinese process of judgment.
- 1602804 Information Technology Law** **3(3-0-6)**
 The study of the relationship, concepts, necessity, and role of laws and institutions related to technology; E-commerce law; laws on computer crime; laws on information technology. The problems and evolution of the law related to social and technology phenomenon which are developing to information society; emphasizing the study of legal problems which come form the development of information technology and modern information management.
- 1602805 Human Rights Law** **3(3-0-6)**
 The study of legal concept relate to Human Rights; meaning and philosophy of human rights; protection of human rights at International level; protection of human rights under Thai law in various aspect.

1602806 Law on Regional Organizations 3(3-0-6)

The condition, status and structure of regional cooperation such as European Union, ASEAN and economic integration of Latin America and Africa countries; emphasizing the impact or disadvantage of such cooperation or integration to Thai economic, business and politic.

1602807 Legal Systems in ASEAN 3(3-0-6)

The history and evolution of Association of Southeast Asian Nations (ASEAN), legal system of states parties, some important laws, court system, legal professions and legal study.

1602808 Comparative Family Law 3(3-0-6)

A study of a Civil and Commercial Code on Family Law, book five, compare with the family law in common law system and the family law of some civil law system countries, as determined by the lecturer.

1602809 Alternative Dispute Resolution 3(3-0-6)

The study of definition, evolution, and methods of various from of dispute settlement both judiciary and non-judiciary dispute settlement, e.g. arbitrarily negotiation, mediation and compromising and present problem from court judiciary dispute settlement; court prospect; analyze the basic concept of civil procedure law.

1602810 Space Law 3(3-0-6)

The study of international law to legislate the rule for space activity; the present and future space exploitation; legislative process for space activity in national and international institution; the participation of government and private sector to legislation; legal system of outer space and various planets; legal status and legislation of the spacecraft; responsibility for the damage from space activity; the rescue of aeronaut and spacecraft; international law and outer space exploitation for military utility.

1602811 Juvenile and Family Justice 3(3-0-6)

The study of general principles of juvenile offences; the law concerning to juvenile protection; juvenile and family justice e.g. the establishment of and procedures in juvenile and family court.

1602812 Advanced Electoral and Parliamentary Law 3(3-0-6)

The theories and issues arising from city separation; evolution of western constitutional concept and model; western constitutionalism; emphasizing the study of constitutional and political institutional history and evolution; the differences between the constitution and reality emphasizing various factors which have influence on constitutional process and the relationship between political institutions.

1602820 Comparative Bankruptcy Law 3(3-0-6)

Historical background and concepts of bankruptcy law. This course covers the basic of methodological and structural differences among bankruptcy law systems and Thai law including the subject of business reorganization. The study emphasizes administration of organization and compares the situation of the creditor in each process of bankruptcy law.

1602821 Advanced Labor Law 3(3-0-6)

The theories concerning labor, state labor policies, relationship between employers and employees; law concerning labor protection; industrial relations; outflow of Thai labor, labor dispute settlement; legal status and the role of unions; International Labor Organization regulation; relationship with Thai labor law.

1602822 Rules on Conflict of Laws 3(3-0-6)

The study of conflict of law theory; foreign elemental legal transaction; conflict of law and other conflict solution; renvoi; thai principle of conflict of law; principle of nationality, habitation, status, rights and duty of foreign person and juristic person.

1602823 International Carriage Law 3(3-0-6)

The rules of international carriage by land, by sea and by air with reference to the rules and the treaties that relate to rights, duty, and responsibility of the owner and the employer in such carriage.

1602824 Law on International Financing to Developing Countries

3(3-0-6)

The principles and legal problems concerning loans of International Monetary Fund relating to the development; loans and role of the World Bank; the United States Agency for International Development and capital enterprise in various development programs; cooperation between World Bank and International Monetary Fund; regulation and advantage and disadvantage of loans from private, government and foreign government organizations; role of Thai industrial enterprise as part of fund rising for national economic development.

1602825 Law on Investment in Natural Resources

3(3-0-6)

The concepts and theories that promote and control the exploitation of natural resources. The forms of investment in natural resources; taxes relating to industrialization in exploitation of natural resources; negotiations; conditions for the exclusive right; the exploitation of natural resources; arbitration for conflicts arising from such investment.

1602826 Law of International Trade in Services

3(3-0-6)

The study of the principles and character of international trade in service industry and the product industry. Especially, international banking; money transfer; credit, international loan; international insurance and rules for responsibility for insurance. An analysis of the role for developed and developing countries of the services industry.

1602827 Economic Analysis of Law

3(3-0-6)

The study of economic theories as a tool to analyze law that determine the relationship between private parties such as the law on tort, property, contract, and the law that determine business behaviors of business unit such as anti-trust law, the law concerning finance, consumer protection law, labor law.

1602828 Advanced Insurance Law

3(3-0-6)

The theories, principles and roles of insurance that develop and promote business and economic of state. The study of theories of advanced insurance law that related to usage; interpretation and development of insurance law as an instrument for the promotion and control of insurance that complies with economic and social development for each country.

1602829 International Contract

3(3-0-6)

The theories, characteristic and legal status of international contracts; the exchange of contract structure when changing direct investment to services investment; contract drafting and review; advantage and disadvantage of developing countries in contract and various enterprises; negotiation concerning international contract; result of international contract; various dispute settlement of conflict arising from interpretation or from breach.

1602830 International Economic Law

3(3-0-6)

An analysis of the economic relationship of developed, developing and least developing countries, economic integration in terms of World Trade Organization agreement, multilateral negotiation, bilateral and multilateral agreement in WTO and analysis of the law concerning the effect of the US and European Union economy to the Thailand imports.

1602831 Advance Tax Law

3(3-0-6)

The study of theory and basic concept of tax law; the relationship between tax law and public finance and budget and state economic; theory and concept of tax classification, tax base, tax rate, tax collecting and the legal process to protect private sector. The principle of various kind of taxation, include revenue, tariff, excise tax, and other important tax e.g. property tax, value added tax, inheritance tax.

1602832 Bankruptcy and Business Reorganization

3(3-0-6)

The study of evolution, theory and principle of bankruptcy and business reorganization; necessity and the relationship of business reorganization and economic; process, methods of business reorganization. The study of bankruptcy procedure, legal problems and necessary practical method relate to bankruptcy procedure; the role of bankruptcy; plaintiff creditor; official receiver; the problems relate to temporary receiving and permanent receiving; problem and effect of the discharge of bankruptcy.

1602833 Theory and Principle of Civil Law**3(3-0-6)**

The history and evolution of Civil Law from Roman era to the present; basic theories of Civil Law on due process, good faith, private rights, mens rea and civil responsibility; civil principles on legal transactions, contract, obligation, relict and property in Thai Civil and Commercial Code; comparison with other related laws.

1602834 Advanced Law on Evidence**3(3-0-6)**

The study of philosophy, theories and concept related to principles of evidence, the result of the concept of evidence on present evidence law; evolution of foreign evidence law which has impacted on Thai evidence law.

1602835 International Commercial Law**3(3-0-6)**

The International Commercial law relating to carriage of goods through the state border which respect to treaties of export and import of goods. Carriage by sea; insurance; letter of credit; international commercial arbitration; the law relating to international trade, considering international treaties and the roles of internal judicial system.

1602836 Advanced Civil Procedural Law**3(3-0-6)**

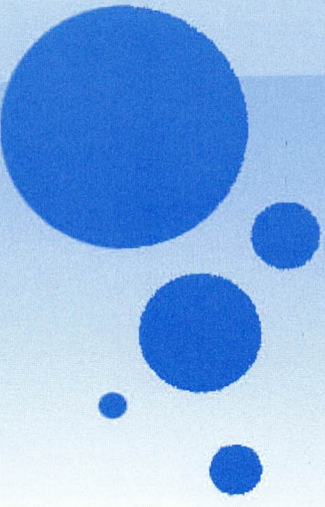
The history and evolution of the civil procedure code; the principles of foreign civil procedure which was used as a basis for the Thai civil procedure code; specific principles and civil procedure such as labor court, revenue court, family and youth court, principles and arbitration procedure; analysis of normal and specific civil procedure process; arbitration procedure.

1602891 Thesis**15(0-45-15)**

Research on a law topic pertinent to individual interest under the supervision and approval of advisory committee. Research progress must be presented in every semester of his dissertation enrollment. Thesis must be submitted after completion and presented.

1602892 Independent Study**6(0-18-6)**

A project has to be submitted in the form of a dissertation, which will be examined by experts nominated by the institute.



School of Science

- ⦿ Master of Science Program In Applied Chemistry
- ⦿ Master of Science Program In Biological Sciences
- ⦿ Master of Science Program In Biotechnology
- ⦿ Master of Science Program In Computational Sciences
- ⦿ Master of Science Program In Ceramic Industrial Technology
- ⦿ Master of Science Program In Material Science

School of Science

Mae Fah Luang University

The School of Science has 6 Master of Science and 5 Doctoral programs. The programs aim to address national needs and government priorities for training and research. In addition, the two undergraduate programs offer flexibility in that the first two years are common to each of the two programs. This means that a student can defer choosing his/her major until the end of the second year of study. The School of Science is committed to developing high-quality teaching and learning programs and in this context, is pursuing excellence in its staff with vigor. The School is an active participant in the university's quality assurance program and is interested in bringing new technologies into the lecture room with a view to enhancing teaching effectiveness and efficiency. Thus, the School of Science strongly supports the University's efforts to achieve instructional excellence in all its activities.

Master of Science

1. Applied Chemistry
2. Biological Sciences
3. Biotechnology
4. Ceramic Industrial Technology
5. Computational Science
6. Materials Science

Doctoral Program

1. Applied Chemistry
2. Biosciences
3. Biotechnology
4. Computational Science
5. Materials Science

Master of Science Program in Applied Chemistry

M.Sc. (Applied Chemistry)

This program aims to produce graduates with analytical ability as well as research and development potential in order to accommodate technological internationalism and to put scientific knowledge into practice in response to the industrial sector's needs, taking into consideration the fact that chemical research and findings play a constructive role in several branches of modern scientific and technological development.

Master of Science Program in Biological Sciences

M.Sc. (Biological Sciences)

This is a multidisciplinary program with an emphasis on every aspect of biological study and research, such as taxonomy, evolution, genetics, ecology, molecular genetics and reproduction.

Master of Science Program in Biotechnology

M.Sc. (Biotechnology)

Biotechnology, a multidisciplinary subject essential to the present and future development of the country, concentrates on the enhancement, advancement, and application of knowledge and development of agriculture, medicine, industry, and environment for the benefit of human welfare.

Master of Science Program in Computational Science

M.Sc. (Computational Science)

This multidisciplinary program concentrates on developing personnel with knowledge of applied science, applied mathematics, computer science and other related disciplines. Simulation and computation by high-performance computers will be employed for purposes of analysis, decision-making and prediction. This program has been designed to promote new trends in research and development, which will give the country a competitive edge in computational science.

Master of Science Program in Ceramic Industrial Technology

M.Sc. (Ceramic Industrial Technology)

Designed to enhance the knowledge of the evolution of ceramic production technology, this program concentrates on strengthening scientific skills for research and development, as well as for methodical problem-solving in the production process. Moreover, this program also integrates studies in business administration and management in response to the needs for new perspectives in ceramic industry development, for the minimization of loss in the production process and for the development of small- and medium-size enterprises whose main strategy is to adjust existing technologies to invent new products and to increase product-value.

Master of Science Program in Materials Science

M.Sc. (Materials Science)

This program, which integrates coursework and thesis-writing, places emphasis on properties of materials, the strengths and weaknesses of each material, and material-property control, all of which can be achieved through the implementation of a micro-structural system in conjunction with an appropriate production process.

This program is available with two study plans.

Plan A (1): This plan requires students to take a non-credit course in research seminar or other non-credit courses, as the School considers necessary, in order to be trained in research methodology. Final requirements for graduation include a thesis and defense thereof.

Plan A (2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.



Master of Science Program in Applied Chemistry

M.Sc. (Applied Chemistry)

Curriculum

Plan A(1)

Total Credits not less than 36 Credits

Curriculum Structure

Plan A(1)

Thesis 36 Credits
Seminar None Credits

Course Requirements

Plan A(1)

1102790 Thesis 36 Credits
1102780 Seminar 36 (0-108-36)
0 (0-6-2)



Master of Science Program in Biological Sciences

M.Sc. (Biological Sciences)

Curriculum

Plan A(1)

Total Credits not less than 36 Credits

Curriculum Structure

Plan A(1)

Thesis 36 Credits
Seminar 0 Credits

Course Requirements

1105790 Thesis Cr(Le-Pr-SS)*
1105780 Seminar 1 36 (0-108-36)
1105781 Seminar 2 0 (0-3-1)
0 (0-3-1)



Master of Science Program in Biotechnology

M.Sc. (Biotechnology)

Curriculum

1. Plan A(1) 36 Credits
2. Plan A(2) 39 Credits

Curriculum Structure

Plan A(2)

Major Required Courses 36 Credits
Major Elective Courses 18 Credits
Thesis 6 Credits
12 Credits

Course Requirements

Plan A(1)

1108890 Thesis Cr(Le-Pr-SS)
36 (0-108-0)

Plan A(2)

Major Required Courses

		18 Credits
1105703	Bioinformation	Cr(Le-Pr-SS)*
1105715	Advanced Plant Physiology	3 (2-3-5)
1105716	Advanced Biochemistry	3 (2-3-5)
1105765	Molecular Biology & DNA Technology	3 (2-3-5)
1105766	Protein Technology	3 (2-3-5)
1105796	Seminar 1	0 (0-3-1)
1105797	Seminar 2	0 (0-3-1)
1106783	Research Methodology	3 (3-0-6)

Major Elective Courses

		6 Credits
1105712	Advanced Plant Tissue Culture	Cr(Le-Pr-SS)
1105714	Plant Cytogenetics	3 (2-3-5)
1105717	Research and Development of Herbal Products	3 (2-3-5)
1105721	Plant Genetics Manipulation	3 (2-3-5)
1105733	Genetics of Lactic Acid Bacteria	3 (2-3-5)
1105734	Extremophiles	3 (3-0-6)
1105752	Metabolic Engineering	3 (3-0-6)
1105767	Recombinant Protein Technology	3 (3-0-6)
1105768	Immunotherapy	3 (3-0-6)
1105791	Selected Topics in Biotechnology	3 (3-0-6)
1105794	Trends in Plant Biotechnology	1 (1-0-2)
1105795	Current Topics in Microbial Biotechnology	1 (1-0-2)

Thesis

		12 Credits
1105891	Thesis	Cr(Le-Pr-SS)
		12 (0-36-0)



Master of Science Program in Computational Science

M.Sc. (Computational Science)

Curriculum

Plan A(1)

Total Credits not less than 36 Credits

Curriculum Structure

Plan A(1)

Thesis

36 Credits

Seminar

36 Credits

0 Credits

Course Requirements

Plan A(1)

1106790	Thesis
1106780	Seminar

Cr(Le-Pr-SS)
36 (0-108-36)
0 (0-6-2)



Master of Science Program in Ceramic Industrial Technology

M.Sc. (Ceramic Industrial Technology)

Curriculum 36 Credits
Plan A(2)

Curriculum Structure 36 Credits
Plan A(2)
Major Required Courses 15 Credits
Major Elective Courses 9 Credits
Thesis 12 Credits

Course Requirements
Plan A(2)
Major Required Courses 14 Credits
Cr(Le-Pr-SS)
1108714 Mechanical Properties of Materials 3 (3-0-0)
1108719 Characterization of Materials 3 (2-1-0)
1108732 Structure and Properties of Ceramics 3 (3-0-0)
1108736 Ceramic Processing Technology 3 (2-1-0)
1108737 Industrial Ceramics 3 (2-1-0)
1108896 Seminar in Ceramics 0 (0-1-0)
Major Elective Courses 9 Credits
Cr(Le-Pr-SS)
1106752 Applications of Mathematic to Materials Science 3 (3-0-0)
1108712 Advanced Characterization of Materials 3 (3-0-0)
1108716 Introduction to Crystallography 3 (3-0-0)
1108718 Materials for Biomedical Applications 3 (3-0-0)
1108735 Ceramics Design 3 (2-1-0)
1108751 Composite Materials 3 (3-0-0)
1202711 Managerial Economics 3 (3-0-0)
1203712 Financial Management 3 (3-0-0)
1203721 Marketing Management 3 (3-0-0)
1203832 Entrepreneurship and Business Ventures 3 (3-0-0)
1203851 Technology and Operations Management 3 (3-0-0)
1203853 Logistics and Supply Chain Management 3 (3-0-0)
Thesis 12 Credits
Cr(Le-Pr-SS)
1108899 Thesis 12 (0-36-0)



Master of Science Program in Materials Science

M.Sc. (Materials Science)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	39	Credits

Curriculum Structure

Plan A(1)	36	Credits
Thesis	36	Credits
Plan A(2)	36	Credits
Major Required Courses	15	Credits
Major Elective Courses	9	Credits
Thesis	12	Credits

Course Requirements

Plan A(1)

1108898	Thesis	Cr(Le-Pr-SS)
		36 (0-108-0)

Plan A(2)

Major Required Courses

1108701	Introduction to Materials Science and Engineering	15 Credits
1108713	Properties of Materials	Cr(Le-Pr-SS)
1108714	Mechanical Properties of Materials	3 (3-0-0)
1108715	Materials Chemistry	3 (3-0-0)
1108719	Characterization of Materials	3 (3-0-0)
1108895	Seminar in Materials Science	3 (2-1-0)
		0 (0-1-0)

Major Elective Courses

1106752	Applications of Mathematic to Materials Science	9 Credits
1108712	Advanced Characterization of Materials	3 (3-0-0)
1108716	Introduction to Crystallography	3 (3-0-0)
1108718	Materials for Biomedical Applications	3 (3-0-0)
1108751	Composite Materials	3 (3-0-0)
1108721	Thermodynamics and Kinetics	3 (3-0-0)
1108724	Phase Transformations	3 (3-0-0)
1108727	Extraction and Processing of Metals and Industrial Alloys	3 (3-0-0)
1108728	Oxidation, Corrosion and Surface Engineering	3 (3-0-0)
1108732	Structure and Properties of Ceramics	3 (3-0-0)
1108736	Ceramic Processing Technology	3 (2-1-0)
1108737	Industrial Ceramics	3 (2-1-0)
1108742	Structure and Physical Properties of Polymers	3 (3-0-0)
1108744	Polymer Processing	3 (3-0-0)
1108746	Polymer Synthesis and Characterization	3 (2-1-0)

Descriptions ::

School of Science

1102780 Seminar

0(0-6-2)

Review of research in the field of applied chemistry. Group discussion. Special presentation by invited speakers from both industry and academic parts.

1102790 Thesis

36(0-108-36)

A self-study course in which students carry out research under the supervision of an advisor. Upon the completion of their research work, students are required to write and submit a thesis. To complete the M.Sc. Program, students must pass a thesis-defense examination.

1105700 Aspects of Biotechnology

3(3-0-6)

An overview of various aspects of biotechnology, particularly the roles of biotechnology in agriculture, industry, medicine, and environment, as well as the impact of biotechnology on human welfare.

1105701 Biotechniques Laboratory

3(0-9-3)

Laboratory practices in the use of various techniques and instruments involved in biotechnological research including techniques and instruments of molecular genetics, biochemistry, and analytical chemistry.

1105702 Bioinformatics

2(2-0-4)

Understanding genomes. Knowledge of how to store and retrieve complex biological information as well as analysis and annotation of biological data. DNA sequence alignment and searching tools. Designing PCR primers. Introduction to proteomics. Protein sequence data analysis. Identification of protein properties. Characterization of protein structure.

1105711 Research and Development of Herbal Products

3(3-0-6)

A study of medicinal plants with economic potential, particularly medicinal plants native to the Northern region, in various aspects such as biology, chemical analysis and extraction of bioactive compounds, pharmaceutical and nutraceutical properties, toxicology, planting and propagation, and development of herbal products with high quality and international standard.

1105712 Advanced Plant Tissue Culture

3(2-3-5)

Theoretical and practical aspects of plant tissue culture techniques and their application in plant propagation and improvement. Application of plant tissue culture techniques in cytological, biochemical, and physiological studies.

1105713 Advanced Plant Physiology

2(2-0-4)

An advanced course dealing with recent research and development in the areas of plant physiology.

1105714 Plant Cytogenetics

3(2-3-5)

Plant chromosomes, cell division and chromosomes' behavior, plant chromosome preparation and staining techniques, karyotype analysis, banding techniques, in situ hybridization technique, preparation of permanent.

1105721 Plant Genetics Manipulation

3(2-3-5)

Plant genomics. Plant genetic engineering. Gene transfer methods in plants. Application of plant tissue culture techniques for plant improvement.

1105731 Genetics of Lactic Acid Bacteria

2(2-0-4)

A study of various aspects of lactic acid bacteria such as taxonomy and general physiology, their implication in human health and diseases. Application of lactic acid bacteria in biotechnology.

1105732 Extremophiles**2(2-0-4)**

A study of various aspects of extremophiles such as taxonomy, physiology, biochemistry, genetics, and ecology. Application of extremophiles in biotechnology. Classification and taxonomy of extremophiles; biochemistry; genetics; ecology and their exploitation in biotechnology.

1105751 Metabolic Engineering**2(2-0-4)**

An overview of metabolic processes in plants and microorganisms, with special emphasis on the processes involved in the biosynthesis of metabolites with economic values such as alcohols, antibiotics, secondary metabolites, and amino acids. Application of the information on the metabolic processes in genetic manipulation of organisms in order to optimize their production of the metabolites.

1105761 Molecular Biology and DNA Technology**3(3-0-6)**

Structure of nucleic acids. Understanding genetic information flow in organisms: DNA replication, RNA and protein synthesis. Control of gene expression and genome complexity. Application of DNA technology in various areas of biotechnology.

1105762 Protein Technology**3(3-0-6)**

Amino acid and protein structure. Relationship between protein structure and function. Studies of enzymes and their application in industry. Protein bioinformatics and protein engineering.

1105763 Recombinant Protein Technology**2(2-0-4)**

Production of recombinant proteins using prokaryotic and eukaryotic systems. Strategies to overproduce proteins. Mechanisms of protein folding. Application of recombinant proteins in various fields of biotechnology.

1105764 Immunotherapy**2(2-0-4)**

Principles of self and non-self recognition. Molecular and cellular compositions of immune systems. Immune response to diseases and associated antigens. Mechanisms of vaccines and anti-microbial methods using immunotherapy that include modern molecular techniques. Latest advances in immunotherapy research including active immunization and use of monoclonal antibodies. The roles of immunoassay in laboratory diagnoses.

1105780 Seminar 1**0(0-3-1)**

Presentations of outstanding researchers in the biotechnology field; presentations of each student on related topics or their research.

1105781 Seminar 2**0(0-3-1)**

Presentations of outstanding researchers in the biotechnology field; presentations of each student on related topics or their research.

1105790 Thesis**36(0-108-36)**

Research study in related areas under supervision; complete thesis and oral defense required upon.

1105791 Selected Topics in Biotechnology**1(1-0-2)**

Students' self study on current issues in biotechnology; literature review; report writing; and presentation.

1105792 Seminar 1**1(0-3-1)**

Presentations of outstanding research in the biotechnological field; presentations by each student on related topics or their research.

1105793 Seminar 2**1(0-3-1)**

Presentations of outstanding research in the biotechnological field; presentations of each student on related topics or their research.

1105794 Trends in Plant Biotechnology**1(1-0-2)**

A weekly presentation of a series of selected topics in plant biotechnology. Students are required to write a report on a topic of their interest.

1105795 Current Topics in Microbial Biotechnology **1(1-0-2)**
Seminars on current issues in microbial biotechnology by lecturers, researchers and industrial experts; students' self study; literature review; report writing and presentation.

1105799 Master's Thesis **16 (0-48-16)**
A self-study course in which students carry out research under the supervision of an advisor. Upon the completion of their research work, students are required to write and submit a thesis. To complete the M.Sc. Program, students must pass a thesis-defense examination.

1106780 Seminar **0(0-6-2)**
Review of research in the field of computational science. Group discussion. Special presentation by invited speakers from both industry and academic parts.

1106790 Thesis **36(0-108-36)**
A self-study course in which students carry out research under the supervision of an advisor. Upon the completion of their research work, students are required to write and submit a thesis. To complete the M.Sc. Program, students must pass a thesis-defense examination.

1108701 Introduction to Materials Science and Engineering **3(3-0-6)**
An introductory course aiming to set up strong foundations in the field of Materials Science and Engineering for graduate students whose backgrounds are in different disciplines. The reasons for the emergence as well as the characteristic of this subject branch are discussed. Comparison between various classes of materials and also their unique engineering applications are covered. Relationships between structure – properties and processing parameters of selected key materials are emphasized.

1108711 Characterization of Materials **4(3-3-7)**
Structural characterization of materials with information obtaining from light microscopy, X-ray diffraction (XRD), scanning electron microscopy (SEM), and thermal analysis techniques. Sample preparation for microscopy analysis. Chemical composition analysis includes X-ray spectroscopy (EDX) and X-ray fluorescence spectroscopy (XRF). Particle size and molecular weight determination. Density measurement. Standard test methods for mechanical properties evaluation: stress-strain curves of various materials; flexural strength, toughness etc.

1108712 Advanced Characterization of Materials **3(3-0-6)**
Prerequisite : 1108711
Electrical testing techniques, such as impedance spectroscopy technique. Surface analysis techniques such as Auger, ESCA. Molecular spectroscopic techniques: NMR, IR, UV, and Raman Spectroscopy.

1108713 Properties of Materials **3(3-0-6)**
The difference in atomic structures, bonding types, and microstructure that gives rise to the diversity of physical properties of various materials. These physical properties include optical, thermal, mechanical, magnetic, and electrical properties. Comparison between predicted values and reported experimental data.

1108714 Mechanical Properties of Materials **3(3-0-6)**
Mechanical behavior of materials based on atomic and micro structural considerations; elasticity, plasticity, yield criteria. Introduction to dislocation theory. Brittle and ductile fracture, fatigue and creep, design criteria, statistical aspects of failure, remaining life prediction and life extension methods. Dynamic and temperature effects. Crack initiation and propagation. Creep, hydrogen and radiation embrittlement, stress corrosion cracking, and wear.

1108715 Materials Chemistry **3(3-0-6)**
Molecular understanding of materials properties. Structures of atoms – quantum chemistry. Thermodynamics and kinetics. Rate laws and diffusion of materials. Symmetry aspects of chemical bonding of molecules. Materials classes including modern examples of polymers, organic semiconductors, ceramics, organic-inorganic hybrids, superconductors, and nano-technology.

1108716 Introduction to Crystallography 3(3-0-6)

Crystal structures and symmetry. Crystal planes and directions; describing lattice planes and directions in crystals; stereographic projections. Point group and symmetry, space group, reciprocal lattice, Weiss zone law, structure factor.

1108717 Computational Materials Science 3(2-3-5)

Review the theoretical aspects of various physical phenomena of major importance to materials scientists. Develop mathematical models from these theories, and construct qualitative solution procedures based on analytical and numerical techniques.

1108718 Materials for Biomedical Applications 3(3-0-6)

Introduction to the interactions between cells and surfaces of biomaterials. Surface chemistry and physics of selected metals, polymers, and ceramics. Surface characterization methodology. Modification of biomaterials surfaces. Biosensors and micro arrays. Acute and chronic response to implanted biomaterials. Topics in biomimetics, drug delivery, and tissue engineering. Laboratory demonstrations.

1108731 Ceramic Processing Technology 4(3-3-7)

Powder processing routes of ceramic raw material including clay minerals, and inorganic chemicals widely used in the ceramic industry. The use of processing additives. Particle packing characteristics. Rheology of suspension and slurries. Milling, separation, and granulation of particles. Science and technology of forming processes, e.g., pressing, plastic forming, slip, gel, and tape casting; post forming processes including drying, firing technology; and finishing.

1108732 Structure and Properties of Ceramics 3(3-0-6)

Chemical bonding in ceramic materials. Crystal structures of ceramics and structure of glasses. Point defect and relation to non-stoichiometry. Line defects and grain boundaries. Diffusion in ionic materials and its relation with point defect structure. Phase diagrams and phase transformation. Kinetics of solid state reaction, atomic diffusion, grain growth and sintering. Discussion of the effects of micro structural characteristics on mechanical, electrical, magnetic, thermal, and optical properties of ceramic materials.

1108733 Defects in Ceramic Products 3(2-3-5)

Types of clay minerals and some selected raw materials (montmorillonite, illite, kaolinite, hollloysite etc): their structure and related properties. Glazes and enamels: batch calculations and modifications. Effects of firing on phase and micro structural changes of clay body and glaze. Ceramic colorants. Ceramic faults and their possible causes. Processes in defect investigations and case studies.

1108734 Ceramics Design 3(3-0-6)

This course is concerned with design technology and materials selection. Methodology and acquisition of skills in origin and development of product design using traditional and computational-based tools. An overview of ceramic designs will be introduced. Analysis of product design and the issues that impact on creative processes such as production constraints, technological implications, price points, brand awareness, and market demands are addressed.

1108751 Composite Materials 3(3-0-6)

Basic concepts of composites. Constituent materials for composites. Structure and mechanical behavior of composites. Fabrication processes such as autoclave, compression molding, filament winding, thermoplastic molding, etc. Mechanical testing of composites and their constituents.

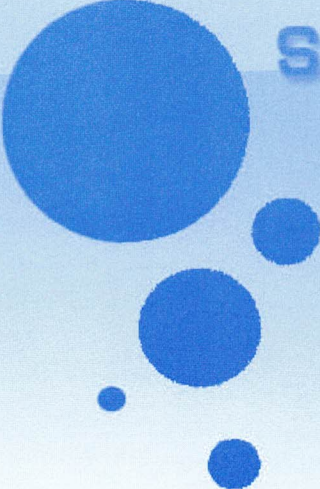
1108891 Thesis 12(0-36-12)

Individual research in Materials Science under the guidance of a member of staff. Students must submit a thesis after completion.

1108894 Seminar in Ceramics 1(0-3-1)

Review of research in the field of ceramic industries. Group discussion. Special presentation by invited speakers from both industry and academic parts.

- 1203721 Marketing Management** **3(3-0-6)**
Covers the concept of marketing and its environment as a philosophy of doing business successfully and hence has relevance to all organizations. It looks at all aspects of marketing management: customer focus, relationship marketing, monitoring the environment, buyer behavior, marketing research, marketing planning, segmenting, targeting and positioning, the marketing mix, new product development, and competitive strategy.
- 1203741 Management in an Information Age** **3(3-0-6)**
Analyzing issues in business management related to information systems, including contemporary management, persuasion, interpersonal communication, ethics, social responsibility of modern day leader.
- 1203772 Contemporary Management Information Systems** **3(3-0-6)**
Information systems for competitive contemporary business management; Business strategy and policy; Data collecting, data analysis for decision making, operation and control.
- 1203831 Strategy in the Business Environment** **3(3-0-6)**
The idea and strategic management process; analysis of the external/internal environment; strategic planning; strategy control; the decision to choose the strategy and method emphasizing case studies and business models.
- 1203832 Entrepreneurship and Business Ventures** **3(3-0-6)**
The design and evaluation of new ventures; exploring the many dimensions of new venture creation and growth and to foster innovation and new business formulations in independent and corporate settings which includes threats and opportunities analysis of entrepreneurs; business feasibility; finding source of fund and etc.; initiation and the application of writing an actual business plan.
- 1203851 Technology and Operations Management** **3(3-0-6)**
Management of operation units in industry; strategy; forecasting; operation processes; inventory; quality assurance and control; production management under uncertainties.
- 1203861 International Business Management** **3(3-0-6)**
Concept and analysis of international business and environment, the international firm; Organizational strategy, marketing, finance, and management in international business.
- 1203862 Cross Cultural Management** **3(3-0-6)**
Cross cultural business strategies; Influences of cultural, politics, economic and social on international business management; Effects of environmental differences among international business.



School of Information Technology

◎ Master of Science Program In Strategic Management
Information System

Master Program

School of Information Technology

Mae Fah Luang University

School of Information Technology offers high-end, unique, multi-dimensional, full-time Bachelor and Masters Programs in IT. The courses have been designed, developed and delivered by active practitioners of IT. All the programs, in addition to the Advanced IT dimension, combine other complementary and enrichment aspects such as Self Management and Leadership.

Master of Science Program in Strategic Management Information System M.Sc. (Strategic Management Information System)

The Master of Science in Strategic Management Information System is designed to provide intensive education and training in Strategic Management Information System and IT management. The three co-ordinates offered are theoretical foundations, applied practice and real-life experience. These are achieved through formal lectures in multimedia projection systems, modern laboratories and real-life project work in association with industries. The aim is to produce IT leaders who will best serve the rapid growth of IT industry in Thailand. This program is available in three study-plans.

Plan A (1): This plan requires students to take a non credit course in research seminar or other non-credit courses, as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan A (2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum

Plan B: For this plan, students have to fulfill credits for core courses and electives as required by the curriculum and must pass a comprehensive examination administered by the university.



Master of Science Program in Strategic Management Information System M.Sc. (Strategic Management Information System)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	40	Credits
3. Plan B	40	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	40	Credits
Major Required Courses	24	Credits
Major Elective Courses	4	Credits
Thesis	12	Credits
3. Plan B	40	Credits
Major Required Courses	30	Credits
Major Elective Courses	4	Credits
Independent Study	6	Credits

Course Requirements

1. Plan A(1)	36	Credits
1303800 Thesis	Cr(Le-Pr-SS)*	36 (0-108-36)
2. Plan A(2)	36	Credits
Major Required Courses	24	Credits
1304711 Business Communication Skill	Cr(Le-Pr-SS)	2 (1-2-3)
1304712 IT Research Methodology		1 (1-0-2)
1304713 Ubiquitous Computing		2 (2-0-4)

1304714	Database Technology and Data Warehousing	2 (1-2-3)
1304715	Software Engineering	2 (2-0-4)
1304716	Web Application Development	2 (1-2-3)
1304717	Managerial Accounting	2 (2-0-4)
1304718	Management Information System	2 (2-0-4)
1304720	Logistics and Supply Chain Management	2 (2-0-4)
1304722	E-business Management	2 (2-0-4)
1304723	Business Intelligence	2 (2-0-4)
1304724	Strategic Management	2 (2-0-4)
1304726	Seminar	1 (0-2-1)

Major Elective Courses

		4 Credits
		Cr(Le-Pr-SS)
1304727	Knowledge Management	2 (2-0-4)
1304728	Advanced Data Communication and Networking	2 (1-2-3)
1304729	XML Technology	2 (1-2-3)
1304730	Software Quality Management	2 (2-0-4)
1304719	IT Human Resource Management	2 (2-0-4)
1304721	Business Process Management	2 (2-0-4)
1304725	Open Standard and Cyber Laws	2 (2-0-4)

Thesis

1303800	Thesis	12 Credits
		Cr(Le-Pr-SS)
		12 (0-36-12)

3. Plan B

Major Required Courses

		18 Credits
		Cr(Le-Pr-SS)
1304711	Business Communication Skill	2 (1-2-3)
1304712	IT Research Methodology	1 (1-0-2)
1304713	Ubiquitous Computing	2 (2-0-4)
1304714	Database Technology and Data Warehousing	2 (1-2-3)
1304715	Software Engineering	2 (2-0-4)
1304716	Web Application Development	2 (1-2-3)
1304717	Managerial Accounting	2 (2-0-4)
1304718	Management Information System	2 (2-0-4)
1304719	IT Human Resource Management	2 (2-0-4)
1304720	Logistics and Supply Chain Management	2 (2-0-4)
1304721	Business Process Management	2 (2-0-4)
1304722	E-business Management	2 (2-0-4)
1304723	Business Intelligence	2 (2-0-4)
1304724	Strategic Management	2 (2-0-4)
1304725	Open Standard and Cyber Laws	2 (2-0-4)
1304726	Seminar	1 (0-2-1)

Major Elective Courses

		4 Credits
		Cr(Le-Pr-SS)
1304727	Knowledge Management	2 (2-0-4)
1304728	Advanced Data Communication and Networking	2 (1-2-3)
1304729	XML Technology	2 (1-2-3)
1304730	Software Quality Management	2 (2-0-4)

Independent Study

1303722	Independent Study	6 Credits
		Cr(Le-Pr-SS)
		6 (0-18-6)

* Cr : Credits
 Le : Lecture
 Pr : Practice
 SS : Self Study

Descriptions ::

School of Information Technology

- 1303722 Independent Study** **6(0-18-6)**
A project submitted in the form of a dissertation which will be examined by experts nominated by the institute.
- 1303800 Thesis** **12(0-36-12)**
A thesis researching any topic in information technology and submitted in the form of a dissertation which will be examined by experts nominated by the institute.
- 1304711 Business Communication Skill** **2(1-2-3)**
Communication skills, written skill, Presentations/seminars skills: leadership and communication among staff; leadership and staff persuasion; leadership and time management.
- 1304712 IT Research Methodology** **1(1-0-2)**
Principles in conducting research in Information Technology, research writing and presentation.
- 1304713 Ubiquitous Computing** **2(2-0-4)**
Wire and wireless technologies, devices for ubiquitous computing (UC), Interfaces, modes of interactions between people and ubiquitous computing devices, applications or environments, Infrastructures and architectures for supporting ubiquitous computing applications, new applications and evaluation methodologies for ubiquitous computing, Social issues and general implications of ubiquitous computing.
- 1304714 Database Technology and Data Warehousing** **2(1-2-3)**
File processing, introductory data structures, the differences between file processing and database processing, fundamental concepts of the relational model, normalization of data, database integrity issues, database design, SQL An overview of the functions of a database management system, Object Oriented (OO) database, comparison between relational and OO databases Data Warehousing concept.
- 1304715 Software Engineering** **2(2-0-4)**
Software process technology, system integration, requirement management, software project management, verification and validation, risk analysis, pattern based reuse, dependable systems development, distributed, system engineering, and legacy systems, the concept of UML.
- 1304716 Web Application Development** **2(1-2-3)**
Web application development process, web engineering process and design, testing and deployment phases in the web application development life-cycle and the S/W tools required for web application.
- 1304717 Managerial Accounting** **2(2-0-4)**
The basic cost accounting, the role of managerial accounting in planning organizing, controlling and decision making.
- 1304718 Management Information System** **2(2-0-4)**
The information needs for organization management and other workers. Information systems wise decision making in association with facilitate information technology and other.
- 1304719 IT Human Resource Management** **2(2-0-4)**
Functions of personnel managers, Roles of industrial relations, personal information, disciplinary process and administration with the emphasis on the IT industry, the concept of outsourcing management and ERP.
- 1304720 Logistics and Supply Chain Management** **2(2-0-4)**
Supply chain management and logistics systems, purchasing, inventory, production, and transportation, interactions and trade-offs among these components using mathematical models and quantitative techniques.

- 1304721 Business Process Management 2(2-0-4)**
Methodologies in business management, project management and controlling, determining strategies in business, Risk management, Process mapping, Analyzing the existing processes and their performance, renewing the process design, verifying new process, examining as well as revising new process, design organization structure and assign job descriptions concept of business process management.
- 1304722 E-business Management 2(2-0-4)**
Foundation of business process, challenges and business opportunity of e-commerce, e-commerce solutions, concepts of SaaS (Software as a service).
- 1304723 Business Intelligence 2(2-0-4)**
Advanced BI concepts, requirements for Business Intelligence, articulating BI solution, business intelligence methodology, enterprise performance management – managing business activities, BI and Competitive Intelligence (CI), new web requirement for BI, advanced corporate reporting, Data Management (DM) for BI, finding things In the BI environment, staging Data – The Operation Data Store (ODS), the Analytical Data Store (ADS) and delivery of data – Enterprise Data Warehouse.
- 1304724 Strategic Management 2(2-0-4)**
Process in strategic management, cooperative missions among stakeholders, analysis of internal and external factors, competitive strategy and the industry environment, corporate strategy, implementing strategic changes, Evaluating strategy performance.
- 1304725 Open Standard and Cyber Laws 2(2-0-4)**
Contract Act, NI Act, patents, designs, trademark, basics of Companies Act, cyber crime, cyber security, IPR, licensing, Open standards.
- 1304726 Seminar 1(0-2-1)**
Practices and application of current issues of information system, and entrepreneurship.
- 1304727 Knowledge Management 2(2-0-4)**
Learning of organization, cultures of organization, management of changes, Organizational Culture, utilizing of technologies process and knowledge Management, planning and evaluating of knowledge management, methodologies and assessments for knowledge management.
- 1304728 Advanced Data Communication and Networking 2(1-2-3)**
Switching Concepts, switches, network protocols, virtual LANs, WAN technologies, hi-speed network, network administration.
- 1304729 XML Technology 2(1-2-3)**
XML, its structure and applications in business, related technologies and its use for e-business application. other topics include DTD, schema, messaging, client and server side XML, XSL, SOAP, XML for B2B and UBL.
- 1304730 Software Quality Management 2(2-0-4)**
Fundamentals of software quality, software life cycle, cost- effective control practices, The SEI-CMMI, The Rational Unified Process (RUP), Agile Development Methodology, ISO 9000 for Software, establishing an SQA Function, quantifying with metrics and reports, certifying quality system, developing quality system.
- 1303722 Independent Study 6(0-18-6)**
A project or an independent study submitted as specified form and inspected by appointed scholars.
- 1303800 Thesis 12(0-36-12)**
A thesis on topics related to software technology submitted as specified form and inspected by appointed scholars.
- 1303801 Thesis 36(0-108-36)**
A thesis on topics related to software technology submitted as specified form and inspected by appointed scholars.



School of Agro-Industry

- ⌚ Master of Science Program In Food Technology
- ⌚ Master of Science Program In Technology Management of Agricultural Produces

School of Agro-Industry

Mae Fah Luang University

School of Agro-Industry was established in 1998 to support the intention of Her Royal Highness Princess Mother to promote the Kingdom sustainable development and perpetual security through social and environmental betterment. It is our mission that we will not only train our agro-industrial graduates and personnel with superior academic quality, competence, conscience and ethics for the country, but also promote fundamental and applied research-and-development projects in academic collaboration with other public and private educational institutes in accordance with their needs. To serve these requirements, research in post harvest, packaging and processing technology, including functional food, food quality and safety as well as food nanotechnology of various raw material communities has been actively conducted by our staff and students. The emphasis is on research related to local produces, including tea, fruits and vegetables, and muscle foods. Therefore, the academic fundamental knowledge and experience will be transferred to surrounding communities and can in this way expedite the communities benefits. Recently, our school has offered the following programs:

1. Master of Science Program in Food Technology
2. Master of Science Program in Postharvest Technology (available in 2009)

Master of Science Program in Food Technology

M.Sc. (Food Technology)

The Food Technology program integrates the application of several contributory sciences related to various operations of food industries, food product development, quality control and assurance, and the use of statistics experimental work with consideration for the environment and safety.

Plan A (1): This plan requires students to take a non credit course in research seminar or such other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan A (2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Master of Science Program in Technology Management of Agricultural Produces

M.Sc. (Technology Management of Agricultural Produces)

This plan emphasizes on management of agricultural produces in order to minimize postharvest losses, consequently, extend shelf life, with a focus on safety of the produces. Students learn to combine science and technology, postharvest handling, transportation and commercial management for effective management of produces. The program is designed as a multidisciplinary course, integrating scientific communication, critical thinking and problem solving into the curriculum.

This Program is available with two study plans.

Plan A (1) : This plan requires students to take a non-credit course in research seminar or other non-credit course, as the School considers necessary, in order to be trained in research methodology. Final requirements for graduation include a thesis and defense thereof.

Plan A (2) : This plan requires students to fulfill core courses, elective, and a thesis, as specified in the curriculum.



Master of Science Program in Food Technology

M.Sc. (Food Technology)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	36	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	36	Credits
Major Required Courses	7	Credits
Major Elective Courses	9	Credits
Free Elective Courses	8	Credits
Thesis	12	Credits

Course Requirements

1. Plan A(1)	36	Credits
1403798 Thesis	Cr(Le-Pr-SS)	
2. Plan A(2)	36	(0-108-36)

Major Required Courses

1106781	Advanced Statistics and Experimental Design	7	Credits
1106782	Research Methodology	Cr(Le-Pr-SS)	
1403797	Seminar 1	3	(3-0-6)
1403897	Seminar 2	2	(2-0-4)
		1	(1-0-2)
		1	(1-0-2)

Major Elective Courses

Food Chemistry

9 Credits

1402721	Advanced Food Chemistry	Cr(Le-Pr-SS)	
1402821	Food Functionality	3	(2-3-5)
1402822	Functional Foods	3	(2-3-5)
1402891	Selected Topics in Food Chemistry	3	(2-3-5)
		3	(3-0-6)

Food Safety and Food Microbiology

1402711	Advanced Food Microbiology	Cr(Le-Pr-SS)	
1402712	Food Toxicology	3	(2-3-5)
1402761	Risk Management	3	(2-3-5)
1402892	Selected Topics in Food Safety	3	(2-3-5)
		3	(3-0-6)

Food Biotechnology

1403711	Food Biotechnology	Cr(Le-Pr-SS)	
1403712	Advanced Fermentation Technology	3	(3-0-6)
1403713	Advanced Food Enzyme Technology	3	(2-3-5)
1403891	Selected Topics in Food Biotechnology	3	(2-3-5)
		3	(3-0-6)

Food Process and Engineering

1404751	Advanced Food Processes	Cr(Le-Pr-SS)	
1404752	Shelf Life Prediction for Food Products	3	(3-0-6)
1404753	Professional Experience	3	(2-3-5)
1404891	Selected Topics in Food Processing and Engineering	3	(0-9-3)
		3	(3-0-6)

Product Development

		Cr(Le-Pr-SS)
1406761	Sensory Evaluation for Product Development	3 (2-3-5)
1406763	Consumer Technology	3 (3-0-6)
1406861	Advanced Product Development	3 (2-3-5)
1406891	Selected Topics in Product Development	3 (3-0-6)

Free Electives Courses**8 Credit****Cr(Le-Pr-SS)**

1105701	Biotechniques Laboratory	3 (0-9-3)
1105761	Molecular Biology and DNA Technology	3 (3-0-6)
1402722	Technology of Food Proteins	3 (2-3-5)
1402723	Technology of Carbohydrates	3 (2-3-5)
1402724	Technology of Fat and Oil	3 (2-3-5)
1402731	Food Physics	3 (2-3-5)
1402811	Molecular Toxicology	2 (2-0-4)
1402823	Flavour Technology	3 (2-3-5)
1402861	Problem Solving and Decision Making in food Industry	2 (2-0-4)
1404754	Food Texture and Rheology	3 (2-3-5)
1404851	Tea and Coffee Technology	3 (2-3-5)
1404852	Food Structure	3 (2-3-5)
1406762	Quality Control Design in Agro-Industry	2 (2-0-4)
1406862	Supply Chain and Logistics Management for Food Industry	2 (2-0-4)

Thesis**Plan A (1)****36 Credits****Cr(Le-Pr-SS)**

1403798	Thesis	36 (0-108-36)
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Plan A (2)**12 Credits****Cr(Le-Pr-SS)**

1403799	Thesis	12 (0-36-12)
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Master of Science Program in Technology Management of Agricultural Produces

M.Sc. (Technology Management of Agricultural Produces)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	36	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	36	Credits
Major Required Courses	17	Credits
Major Elective Courses	7	Credits
Thesis	12	Credits

Course Requirements

1. Plan A(1)	36	Credits
	Cr (Le-Pr-SS)*	
1407891 Thesis	36 (0-108-0)	
2. Plan A(2)	36	Credits
Major Required Courses	17	Credits

1407700	Agricultural Research Methodology	Cr (Le-Pr-SS)
1407740	Postharvest Biology and Technology	3 (3-0-6)
1407741	Postharvest Technology of Fruits and Vegetables	3 (2-3-5)
1407760	Logistics and Supply Chain for Agricultural Prodeces	3 (2-3-5)
1407761	Management of Agricultural Produce for Trade and Export	3 (3-0-1)
1407790	Seminar in Technology Management of Agricultural Produces 1	3 (3-0-6)
1407890	Seminar in Technology Management of Agricultural Produces 2	1 (0-3-1)
		1 (0-3-6)

Major Elective Courses

7 Credits
Cr (Le-Pr-SS)

1406761	Sensory Evaluation for Product Development	3 (2-3-5)
1406762	Quality Control Design in Agro-Industry	2 (2-0-4)
1407710	Postharvest Pathology	3 (2-3-5)
1407742	Postharvest Technology of Cereals and Legumes	3 (2-3-5)
1407743	Postharvest Handling System of Ornamental Plants	3 (2-3-5)
1407750	Postharvest Operations Engineering	3 (2-3-5)
1407840	Postharvest Technology of Tea, Coffee and Cocoa	3 (2-3-5)
1407841	Selected Topics in Technology Management of Agricultural Produces	1 (0-3-1)
1407842	Packaging Technology for Agricultural Produces	3 (2-3-5)
1407843	Postharvest Technology of Muscle Foods	3 (2-3-5)
1105765	Molecular Biology & DNA Technology	3 (2-3-5)
1203863	Border Trade Management	3 (3-0-6)
1209707	Reverse Logistics and Return Management	3 (3-0-6)
1209708	Technology and Information System for Logistics and Supply Chain Management	3 (3-0-6)
1209804	Procurement and Supply Management	3 (3-0-6)

Thesis

12 Credits
Cr (Le-Pr-SS)
12 (0-36-0)

1407892	Thesis
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- * Cr : Credit
Le : Lecture
Pr : Practice
SS : Self Study

Descriptions ::

School of Agro-Industry

1402711 Advanced Food Microbiology

3(2-3-5)

Pathogenesis and violence of foodborne microbial agents, Modern methods for detection and characterization of pathogens; ELISA, PCR, biosensor, DNA probe. Methods to control food pathogens and spoilage microorganisms; Microbial problem for different types of foods meat, sea food, fruit and vegetable, dairy products, canned fresh, dehydrated foods, fermented foods ect.

1402712 Food Toxicology

3(2-3-5)

Routes of contamination, natural toxin in food plants and animals, cancer modulation substances, mycotoxin, pesticides, metals, packaging materials, hormones and animal drugs residues, biotransformation of xenobiotic compounds, biosecurity, demonstration of important toxicological methods and innovative toxicological approaches, toxicological experiments by using in vitro methods.

1402721 Advanced Food Chemistry

3(2-3-5)

Composition, structures and reactions of proteins, carbohydrates and lipids in food systems. Analytical techniques, isolating, identifying, quantifying of these compounds. Mechanisms of the effect of processing and storage conditions on the properties of proteins, carbohydrates and lipids.

1402722 Technology of Food Proteins

3(2-3-5)

Types, structures, functions and properties of proteins in foods. Production, extraction and separation of proteins from plants, animal, and microorganisms. Evaluation and modification of proteins in food industry. Proteins substitution in food formulation. Advancement in protein researches.

1402723 Technology of Carbohydrates

3(2-3-5)

Types, structures, functions and properties of carbohydrate and hydrocolloids in foods; Extraction and separation of carbohydrates from plants. Evaluation and modification of starch in food industry. Advancement in carbohydrate researches.

1402724 Technology of Fat and Oil Faculty of Agro-industry

3(2-3-5)

Types, structures, functions and properties of fat and oil in foods. Extraction and refinery of fat and oil from plants, and animal. Roles of fat and oil in food industry. Modification of fats. Hydrogenated fats. Antioxidants. Emulsifiers in fat and oil system. Application of fat and oil and their deterioration. Advancement in fat and oil

1402726 Food Additives

3(2-3-5)

Role, function and uses of different food additives; natural additives; nutrient substituents; analysis and assessment of safety; standards and regulations of additives.

1402731 Food Physics

3(2-3-5)

Physical and engineering properties of foods; mechanical, surface, thermal, electrical and optical properties; The physical properties of foods and their changes that occur during manufacturing and storages; Structure of solid biomaterials; Phase transition of biomaterials; Applications to food system, i.e. harvesting, handling, processing, storage and quality evaluation.

1402761 Risk Management

3(2-3-5)

Opportunities, risks, and impact of toxicity, various toxicity tests, their end points and hierarchy, critical effects and uncertainty factors, and the calculation of health-based guidance values, specific problems created by carcinogens and other types of chemicals; crop protection agents and food additives. Comprehensive, overview of essential tools and techniques for qualitative and quantitative risk analysis.

1402811 Molecular Toxicology 2(2-0-4)

This course is focused on the cellular and molecular mechanisms of toxicant interactions with critical target organelles and molecules, and subsequent downstream cellular responses including mutagenesis, cell death by apoptosis, altered functions, cell cycle blockage, and oncogenic transformation. Various classes of physical and chemical agents will be considered such as drugs, food contaminants, industrial chemicals and pollutants, and radiation. Topics include formation of reactive metabolites, interactions of chemicals with DNA and proteins, induction of mutations, gene-specific damage and transcription inhibition, DNA repair deficiencies and disease, mechanisms of cytotoxicity and apoptosis, cellular protective systems, genetic predisposition to chemical toxicity, chemical carcinogenesis, and mechanisms of toxicity in liver, lung, and immune systems. The course will emphasize a comparative species approach to understanding toxicant mechanisms of action.

1402821 Food Functionality 3(2-3-5)

Functional properties of carbohydrates, proteins, and lipids. Mechanism of their functions in food systems. Interactions between these compositions in foods. Roles on interactions on food stabilisation.

1402822 Functional Foods 3(2-3-5)

Bio-active or health-promoting properties of food. Identification of ingredients and raw material constituents contribute these characteristics. Potential activity in the human body. Methods to retain the activity in the food. Development of functional foods and regulatory.

1402823 Flavour Technology 3(2-3-5)

Types, compositions and properties of flavouring substances; Production, analysis, evaluation of flavoring substances; Changes and deterioration; Application of flavouring substances in food industry. Natural and artificial flavour. Food regulations for flavours. Modified food flavors.

1402861 Problem Solving and Decision Making in food Industry 2(2-0-4)

Define and verify the problems in food industry, gather all the facts and understand their causes, brainstorm possible options and solutions consider and compare the pros and cons of each option, select the best option, explain the best option and decision to those involved and affected, and follow up to ensure proper and effective implementation.

1402891 Selected Topics in Food Chemistry 3(3-0-6)

Review and evaluate critical current issues in food chemistry; Present and submit a concise report in a written paper

1402892 Selected Topics in Food Safety 3(3-0-6)

Review and evaluate critical current issues in food safety; Present and submit a concise report in a written

1403711 Food Biotechnology 3(3-0-6)

Developments in biotechnology as it relates to food production and processing concerning traditional food fermentations as well as novel food biotechnology enzymes, ingredients, genetic engineering, plant tissue culture and developments for microbiological and food analysis. Ethical, public, nutritional and safety issues in food

1403712 Advanced Fermentation Technology 3(3-0-6)

Prerequisite: None

Sterilization and operation of bioreactors. Batch culture and continuous culture fermentation. Fermentation processes: controls of the process; product recoveries and microorganisms involved in fermentation industries. Alcoholic fermentation: processing of alcoholic beverages and biofuel. Lactic acid fermentation and processing of some local fermented products. Plant tours. Other products from fermentation, such as microbial enzymes, acids and amino acids, vaccines, prebiotics and probiotics.

1403713 Advanced Food Enzyme Technology 3(2-3-5)

Enzyme classification. Enzyme kinetics. Enzymes as they pertain to the deteriorative processes, as processing aids and their use as analytical tools in food systems. Enzyme applications in food industry.

- 1403797 Seminar 1** **1(1-0-2)**
Literature search, discussion, presentation and report on current research developments in advanced research issues in food science and technology area.
- 1403798 Thesis** **36(0-108-36)**
Research on a Food Science and Technology topic pertinent to individual interest under the supervision and approval of advisory committee. Research progress must be presented in every semester of his dissertation enrollment. Thesis must be submitted after completion and presented.
- 1403799 Thesis** **12(0-36-12)**
Research on a Food Science and Technology topic pertinent to individual interest under the supervision and approval of advisory committee. Research progress must be presented in every semester of his dissertation enrollment. Thesis must be submitted after completion and presented.
- 1403891 Selected Topics in Food Biotechnology** **3(3-0-6)**
Review and evaluate critical current issues in food biotechnology; Present and submit a concise report in a written paper.
- 1403897 Seminar 2** **1(1-0-2)**
Literature search, discussion, presentation and report on current research developments in advanced research issues in food science and technology area.
- 1404751 Advanced Food Processes** **3(3-0-6)**
Principles of recently developed food processes, including thermal (i.e. ohmic heating, new high (radio) frequency and microwave methods, aseptic processing, osmotic treatment, and extrusion technology) and non-thermal processes (i.e. high pressure processing, electrical pulse methods (high voltage impulses), electron beam, electrolyte water, membrane separation and supercritical fluid extraction); Effect of processing on product properties and product quality.
- 1404752 Shelf Life Prediction for Food Products** **3(2-3-5)**
Quality of food and shelf-life stability. Quality tests. Factors affecting shelf life of food products; Diffusion theory of particles; Permeability of packaging materials and packages; Water vapor and gas transmission rate of packaging; Role of water activity and accelerated food shelf life testing techniques; Sorption isotherm; Reaction kinetics occurring in foods, i.e. oxidative reactions of lipid, Microbial growth and death; Testing and prediction of product shelf life using mathematical models.
- 1404753 Professional Experience** **3(0-9-3)**
Study and solve a problem related to food processing and engineering in a commercial operation under supervision of operations manager and designated faculty member; report results in a professional paper approved by the graduate committee and oral presentation
- 1404754 Food Texture and Rheology** **3(2-3-5)**
Behavior and Rheological models of food systems; Theory of rheology; Rheometry; Instrumental and sensory methods of analysis; Descriptive texture analysis, Factors affecting food textures; Texture of specific systems including liquids, gels, emulsions and solids.
- 1404851 Tea and Coffee Technology** **3(2-3-5)**
Origin and history of development of tea and coffee; Chemistry; Classification; Harvesting; Processing; Blending; Packaging; Instrumentations and control systems; Standards; Health effects and safety considerations; Product development and Market trends; Excursion.
- 1404852 Food Structure** **3(2-3-5)**
Structure and microstructural aspects of foods; Roles of proteins, water, starch and other biopolymers; Food polymer and colloid systems; Microencapsulation; Theory and application of film formation, foaming, thickening, gelatinization and globular formation hydrolysis process; Methods for analyzing food structure.

- 1404891 Selected Topics in Food Processing and Engineering** 3(3-0-6)
Review and evaluate critical current issues in food process and engineering; present and submit a concise report in a written paper
- 1406761 Sensory Evaluation for Product Development** 3(2-3-5)
Overview sensory evaluation, application of sensory evaluation for product development, advanced sensory method; discriminative test, descriptive test and affective test and case studied.
- 1406762 Quality Control Design in Agro-Industry** 2(2-0-4)
Overview food quality, Quality management, Quality design, Quality policy and business strategy, Quality audit and Quality cost.
- 1406763 Consumer Technology** 3(3-0-6)
Concepts of consumer technology; Consumer behavior, Consumer environment, Consumer analysis; Consumption strategies. Case study for food industry
- 1406861 Advanced Product Development** 3(2-3-5)
Principle of consumer oriented new product development, Product development in food industry, Accelerating food product design and development, Tools for new product planning, Advanced systemic product development and optimizing food product design and development.
- 1406862 Supply Chain and Logistics Management for Food Industry** 2 (2-0-4)
Supply chain concepts; Classification of supply chains and networks, Supply chain network design and planning, Logistics management; The relationship between logistics and SCM-scope, Supply chain and logistics strategies.
- 1406891 Selected Topics in Product Development** 3(3-0-6)
Review and evaluate critical current issues in product development; present and submit a concise report in a written paper.
- 1407700 Agricultural Research Methodology** 3(3-0-6)
Principles of agricultural research and advanced instrumental analysis of agricultural produces; conceptual framework; research design; literature review; writing a research proposal; research planning and management; data collecting and statistic analysis of data; interpretation of experimental data; writing a research report.
- 1407710 Postharvest Pathology** 3(2-3-5)
Introduction; postharvest disease initiation; factors affecting disease development; attack mechanisms of the pathogen; host protection and defense mechanisms; physiological and biochemical changes following infection; loss assessment of postharvest diseases of produces; types of damage, symptoms and causal agent; control measures of postharvest diseases; novel approaches for enhancing host resistance.
- 1407740 Postharvest Biology and Technology** 3(2-3-5)
Nature and structure of harvested product; metabolic processes, respiration and water losses of harvested products; ethylene and other plant hormones; quality and maturity; pre- and postharvest factors affecting fruit and vegetable quality; physiological and biological changes during storage; biological and environmental factors influencing deterioration; plant senescence; technology for quality maintenance of harvested products.
- 1407741 Posthavest Technology of Fruits and Vegetables** 3(2-3-5)
Factors affecting losses of fruits and vegetables; situation of production and exportation of fruits and vegetables; good agricultural practices; quality of fruits and vegetables for exporting; food safety; maturity index; harvesting; packing house operation; cooling; postharvest control of disease and insect; refrigeration system; modified atmosphere packaging; package; transportation system; traceability; field trip to company or packaging.
- 1407760 Logistics and Supply Chain for Agricultural Produces** 3(3-0-1)
Definition and primary concept of logistics and supply chain; importance of logistics and supply chain for agriculture; situation of logistics and supply chain for agricultural produces; principles of agricultural logistics and supply chain; transportation and distribution; technology of tracking and traceability for agricultural produces; trading and marketing.

1407843 Postharvest Technology of Muscle Foods

3(2-3-5)

Chemical and physical structure of muscle foods; pre-harvest handling and slaughtering; factors affecting muscle foods quality; post-mortem changes of muscle; spoilage of muscle foods; quality and safety measurement; postharvest handling and storage system, transportation, packaging, and extending shelf-life.

1407890 Seminar in Technology Management of Agricultural Produces

1(0-3-6)

Preparation, presentation, discussion and report on current interests in technology management of agricultural produces emphasized the topics in relation to thesis research.

1407891 Thesis

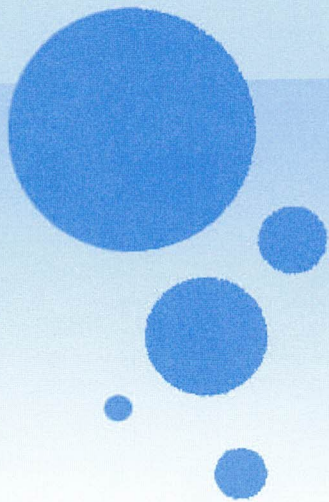
36 (0-108-0)

Research on postharvest technology topic pertinent to individual interest under the supervision and approval of advisory committee. Research progress must be presented in every semester of his/her thesis enrollment. Thesis must be submitted after completion and presented.

1407892 Thesis

12 (0-36-0)

Research on postharvest technology topic pertinent to individual interest under the supervision and approval of advisory committee. Research progress must be presented in every semester of his/her thesis enrollment. Thesis must be submitted after completion and presented.



School of Cosmetic Science

⊙ Master of Science Program In Cosmetic Science

Master Program

School of Cosmetic Science

Mae Fah Luang University

The School of Cosmetic Science, established in January 2005, currently offers study programs both at the B.Sc. and M.Sc. levels. Both curricula have been designed to provide fundamental and advanced knowledge as well as skills in cosmetic science for students wishing to pursue their careers in the cosmetic industry. Our School is the first institution in Thailand to offer this discipline.

Master of Science Program in Cosmetic Science

M.Sc. (Cosmetic Science)

Master of Science Program in Cosmetic Science Plan A(1); A(2) and Plan B

The curriculum has been designed to provide fundamental and advanced knowledge and skills in cosmetic for students aishing to pursue their careers in the cosmetics industry. This program is available with three study plans;

Plan A (1): This plan requires students to take a non credit course in research seminar or other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include a thesis and defense thereof.

Plan A (2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Plan B: For this plan, students have to fulfill credits for core courses and electives as required by the curriculum and have to pass a comprehensive examination administered by the university.



Master of Science Program in Cosmetic Science

M.Sc. (Cosmetic Science)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	36	Credits
3. Plan B	39	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	36	Credits
Major Required Courses	18	Credits
Major Elective Courses	6	Credits
Thesis	12	Credits
3. Plan B	39	Credits
Major Required Courses	36	Credits
Independent Study	3	Credits

Course Requirements

1. Plan A(1)	36	Credits
	Cr(Le-Pr-SS)*	
1702799 Thesis	36	(0-108-36)

2. Plan A(2)

Major Required Courses

1702700	Science and Culture of Cosmetics	36 Credits
1702701	Applied Statistics and Research Methodology	18 Credits
1702711	Cosmetic Product Formulation	Cr(Le-Pr-SS)
1702731	Instrumental Analysis in Cosmetic Science	3 (3-0-6)
1702732	Cosmetic Product Evaluation	3 (3-0-6)
1702791	Seminar 1	3 (3-0-6)
1702792	Seminar 2	4 (0-12-4)
		3 (3-0-6)
		1 (0-3-1)
		1 (0-3-1)

Major Elective Courses

1702751	Aromatherapy	6 Credits
1702752	Skin and Cosmetic Science	Cr(Le-Pr-SS)
1702753	Hair and Cosmetic Science	3 (3-0-6)
1702754	Beauty Therapy	3 (3-0-6)
1702755	Cosmetic Surgery	3 (3-0-6)
1702756	Current Topics in Cosmetic Science	3 (3-0-6)
1203721	Marketing Management	3 (0-9-3)
1203751	Quantitative Analysis for Business	3 (3-0-6)
1203831	Strategy in the Business Environment	3 (3-0-6)
1203851	Technology and Operations Management	3 (3-0-6)
1203832	Entrepreneurship and Business Ventures	3 (3-0-6)
1203833	Negotiation	3 (3-0-6)
1203834	Futurology for Executives	3 (3-0-6)
1203835	Ethics and Business Environments	3 (3-0-6)

Thesis

1702798	Thesis	12 Credits
		Cr(Le-Pr-SS)
		12 (0-36-12)

3. Plan B

Major Required Courses

1702702	Advanced Cosmetic Science for Skin	39 Credits
1702703	Advanced Cosmetic Science for Hair and Nail	36 Credits
1702704	Advanced Cosmetic Science for Aromatherapy and Spa	Cr(Le-Pr-SS)
1702705	Advanced Cosmetic Science for Color and Make-up	9 (8-3-17)
		9 (8-3-17)
		9 (8-3-17)
		9 (8-3-17)

Independent Study

1702893	Independent Study	3 Credits
		Cr(Le-Pr-SS)
		3 (0-12-3)

* Cr : Credits

Le : Lecture

Pr : Practice

SS : Self Study

Descriptions ::

School of Cosmetic Science

- 1702700 Science and Culture of Cosmetics 3(3-0-6)**
History and development; types of cosmetic products; hair and skin care products; make-up products; fragrances; raw materials; use, importance and applications; formulation and evaluation; law relating to cosmetics social issues relating to cosmetic products.
- 1702701 Applied Statistics and Research Methodology 3(3-0-6)**
Overview of statistical concepts and methodology; questionnaire design; data collection; analysis and evaluation; applications of results to industry and business.
- 1702702 Advanced Cosmetic Science for Skin 9(8-3-17)**
Structure and functions of skin; classification of skin conditions and skin problems; research and development for skin care products; importance and applications; formulation and evaluation; cosmetic law; social issues related to cosmetic products; in vitro testing; animal and human testing; claims substantiation; sensory evaluation; marketing and business plan for skin cosmetic products; regulation on skin cosmetic products.
- 1702703 Advanced Cosmetic Science for Hair and Nail 9(8-3-17)**
Hair and Nail structure and functions; cosmetic products used for hair and nail care; current trends; types of raw materials and natural products; formulating and development techniques; product preservatives; quality control theory and concept of cosmetic product evaluation; analytical approach; safety and stability; marketing and business planning for hair and nail cosmetic products.
- 1702704 Advanced Cosmetic Science for Aromatherapy and Spa 9(8-3-17)**
History and development of perfumes and fragrances; natural and synthetic aromatic materials; their use in therapeutic applications; healing mechanisms; types of spa; research and development of aromatherapy and spa products; overview of statistical concepts and methodology; analysis and evaluation; application of results to industry, marketing and business.
- 1702705 Advanced Cosmetic Science for Color and Make-up 9(8-3-17)**
Health and beauty; facial and make-up techniques; eyebrow and eyelash treatments; types of color and make-up products; materials used in make-up cosmetics; background of quantitative and qualitative analysis; use of advanced instruments relevant to cosmetic products analysis and evaluation; study of the principles and effectiveness of business negotiations; analysis of case studies of organized negotiations.
- 1702711 Cosmetic Product Formulation 3(3-0-6)**
Types of raw materials and natural products; cosmetic composition; formulation and development techniques; product preservatives; product registration and labeling; production of novel cosmetic products.
- 1702731 Instrumental Analysis in Cosmetic Science 4(0-12-4)**
Background of quantitative and qualitative analysis; use of advanced instruments relevant to cosmetic product analysis and evaluation; clinical trials; industrial site visit.
- 1702732 Cosmetic Product Evaluation 3(3-0-6)**
Theory and concept of cosmetic product evaluation; analytical approaches; safety and stability; in vitro testing; animal and human testing; sensory evaluation; marketing and business planning.
- 1702751 Aromatherapy 3(3-0-6)**
History and development of perfumes and fragrances; natural and synthetic aroma materials; use in therapeutic applications; healing mechanisms; current trends.
- 1702752 Skin and Cosmetic Science 3(3-0-6)**
Structure and functions of skin; skin care; cosmetic products used for skin care; skin sensitivity and allergies; current trends.

1702753 Hair and Cosmetic Science**3(3-0-6)**

Hair structure and functions; causes of hair damage; hair care; cosmetic products used for hair care; current trends.

1702754 Beauty Therapy**3(3-0-6)**

Health and beauty; facial and make-up techniques; hair removal and lightening techniques; eyebrow and eyelash treatments; nail treatments; work placement in a salon; customer relationships.

1702755 Cosmetic Surgery**3(3-0-6)**

Types and structure of tissues; tissue interaction and response; wrinkles and lesions; blepharoplasty and incisional procedures; tissue rejuvenation; laser treatment.

1702756 Current Topics in Cosmetic Science**3(0-9-3)**

Analysis and discussion of recent publications; developments and issues in cosmetic science.

1702791 Seminar 1**1(0-3-1)**

Presentation, discussion and analysis of recent development and specific topics in cosmetic science related to technology, innovation, industry, research and thesis.

1702792 Seminar 2**1(0-3-1)**

Presentation, discussion and analysis of recent development and specific topics in cosmetic science related to technology, innovation, industry, research and thesis.

1702798 Thesis**12(0-36-12)**

Individual research in the various areas of specialization in cosmetic science; proposal submission; proceeding presentation; comprehensive examination; defense of thesis.

1702799 Thesis**36(0-108-36)**

Individual research in the various areas of specialization in the cosmetic science; proposal submission; proceeding presentation; comprehensive examination; defense of thesis.

1702893 Independent Study**3(0-12-3)**

Each student chooses a topic of interest related to cosmetic science issues. Research methodology will be under a closely supervised by supervisors.

1203721 Marketing Management**3(3-0-6)**

The course covers the concept of Marketing and its environment as a philosophy of doing business successfully and hence has relevance to all organizations. It looks at all aspects of marketing management: customer focus, relationship marketing, monitoring the environment; buyer behavior; marketing research; marketing planning; segmenting, targeting and positioning; the marketing mix, new product development and competitive strategies.

1203751 Quantitative Analysis for Business**3(3-0-6)**

Relationship between management science and decision making processes; methodology in quantitative analysis; mathematical models and their applications to business; current issues of concern.

1203831 Strategy in the Business Environment**3(3-0-6)**

Strategic management processes; analysing external and internal environments; strategic planning; strategy control; choosing the strategies and methodology with case studies and business models.

1203832 Entrepreneurship and Business Ventures**3(3-0-6)**

The design and evaluation of new ventures; exploring the many dimensions of new venture creation and growth; foster innovation and new business formulations in independent and corporate settings which includes threat and opportunity analysis of entrepreneurs; business feasibility; sourcing of funds ; initiation and writing a business plan.

1203833 Negotiation**3(3-0-6)**

Deal making and dispute resolution in the context of business transactions with a special emphasis on methodology; style; practices business writing for handling conflicts.

1203834 Futurology for Executives

3(3-0-6)

Concept of future change; effect of economic change: social; political; management; human relation; and how they affect the business environment.

1203835 Ethics and Business Environments

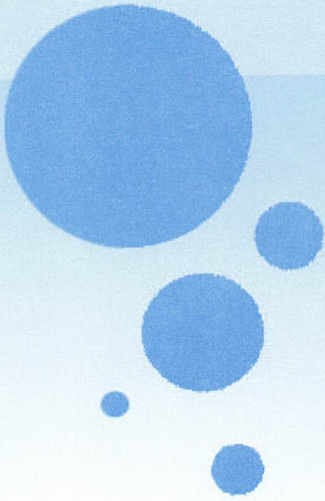
3(3-0-9)

Business environments; stakeholders; ethical management; social responsibility.

1203851 Technology and Operations Management

3(3-0-6)

Management of operation units in industry; strategies; forecasting; operation processes; inventories; quality assurance and control; production management during uncertainties.



School of Health Science

⦿ Master of Science Program In Public Health

Master Program

School of Health Science

Mae Fah Luang University

It is inevitable that in our present age of globalization public health problems are changing in their scope and complexity. The level of involvement in public health planning and intervention is no longer limited to individual, family, and community, but has a global dimension too. Increasingly leaders in Public Health need to be experienced in modern public health practice, research and leadership, in a rapidly changing social, cultural, environmental and economic world.

This Master program of the School of Health Science aims to produce Master degree graduates who are well grounded in public health academic, research, and management aspects, appropriate to the requirements of either a national or international future employer.



Master of Science Program in Public Health (International Program) M.Sc. (Public Health)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	45	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	36	Credits
Major Required Courses	24	Credits
Major Elective Courses	6	Credits
Thesis	6	Credits

Course Requirements

1. Plan A(1)	36	Credits
	Cr (Le-Pr-SS)*	

	Non Credits Courses	
1804701	Public Health in 21st Century	0 (2-0-4)
1804709	Research Methods in Public Health	0 (3-0-6)

Thesis

1804801	Thesis	Cr (Le-Pr-SS)*
		36 (0—108-36)

2. Plan A(2)

Major Required Courses

		36	Credits
		24	Credits
		Cr (Le-Pr-SS)	
1804702	Epidemiology and Disease Control	3	(3-0-6)
1804703	Applied Biostatistics	3	(2-2-5)
1804704	Strategic Management for Health System	3	(3-0-6)
1804705	Behavioral Science and Health Education	3	(3-0-6)
1804706	Research Methods in Public Health	3	(3-0-6)
1804707	Environmental Health , Occupational Health and Safety	3	(3-0-6)
1804708	Public Health Field Training	6	(0-18-0)

Major Elective Courses

		6 Credits
1804803	Disaster Management and Preparedness	Cr (Le-Pr-SS) 2 (2-0-4)
1804804	Environmental Management and Development	3 (3-0-6)
1804805	Environmental Impact Assessment and Risk Assessment	3 (3-0-6)
1804806	Health Manpower Management and Development	3 (3-0-6)
1804807	Public Health Administration and Policy	3 (3-0-6)
1804810	Statistical Methods in Epidemiology	3 (2-2-5)
1804811	Management of Infectious Disease and Control	3 (3-0-6)
1804812	Social Epidemiology	2 (2-0-4)
1804808	Community Nutrition	3 (3-0-6)
1804809	Principles of Health Promotion	3 (3-0-6)
1804813	Health and Human Rights	2 (2-0-4)
1804814	Race, Ethnicity and Health	2 (2-0-4)
1804815	Natural Product Pharmacology	3 (3-0-6)
1804816	Ethno Botany	3 (3-0-6)
1804817	Public Health Seminar	2 (2-0-4)

Thesis

1804802	Thesis	12 Credits Cr (Le-Pr-SS) 12 (0-36-0)
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* Cr : Credits
Le : Lecture
Pr : Practice
SS : Self Study

Descriptions ::

School of Health Science

1804701 Public Health in 21st Century

0(2-0-4)

Prerequisite: None

Concept in public health operation, goal, target population, strategic methods in new public health paradigm, globalization and health, migration, health situation in the present era, access to care, health resource management for health care service.

1804702 Epidemiology and Disease Control

3(3-0-6)

Prerequisite: None

Principles of epidemiology, natural history of diseases, epidemiology study design, health screening, epidemiology and disease control, surveillance and investigation.

1804703 Applied Biostatistics

3(2-2-5)

Prerequisite: None

Characteristics of data, basic data management, probability, distribution, statistic for hypothesis testing, samples sizes estimation, analysis of variance, analysis of co-variance, statistical testing for non-parametric, simple regression and correlations, multiple regression and correlation, logistic regression, and interpretation.

1804704 Strategic Management for Health System

3(3-0-6)

Prerequisite: None

Principles of strategic management, nature of strategic management, external environmental analysis, internal environmental analysis, determinants and process of strategic planning and development, strategic control for health organization.

1804705 Behavioral Science and Health Education

3(3-0-6)

Prerequisite: None

Concept, theories and application of behavioral science relevant to changing of health behavior, process of behavioral change, methods of health education, assessment of health education outcomes.

1804706 Research Methods in Public Health

3(3-0-6)

Prerequisite: None

Process of public health research, research questions, objectives, hypothesis, study design, selection of study design, development and writing of research proposal, literature review, data collection, variables, results, conclusion, rewriting and manuscript, editing and preparation for publishing.

1804707 Environmental Health , Occupational Health and Safety

3(3-0-6)

Prerequisite: None

The importance of environmental problems management, environmental factors and health, principles of occupational health and safety, assessment of occupational hazards and control measures, principles of occupational health service.

1804708 Public Health Field Training

6(0-18-0)

Prerequisite: None

Field study of public health systems by multidiscipline; problems identification and analysis; planning and management of interventions, evaluation, assessment and report.

1804709 Research Methods in Public Health

0(3-0-6)

Prerequisite: None

Process of public health research, research questions, objectives, hypothesis, study design, selection of study design, development and writing of research proposal, literature review, data collection, variables, results, conclusion, rewriting and manuscript, editing and preparation for publishing.

1804801 Thesis**36***Prerequisite: None*

Conducting a public health research, focusing on environmental problem management, behavior changing, public health administration, investigation of health risk factors and control, for new body of knowledge. Systematic literature reviews of public health problem solving at community, national and international levels.

1804802 Thesis**12 (0-36-0)***Prerequisite: None*

Conducting a public health research, focusing on environmental problem management, behavior changing, public health administration, investigation of health risk factors and control, for new body of knowledge. Systematic literature reviews of public health problem solving at community, national and international levels.

1804803 Disaster Management and Preparedness**2(2-0-4)***Prerequisite: None*

Types and effects of natural and man made disasters, contributing factors of disaster, disaster assessment, warning systems and preparedness, disaster management in the short and long term focusing on physical and mental health.

1804804 Environmental Management and Development**3(3-0-6)***Prerequisite: None*

Principles of environmental assessment, process of environmental problem solving, and environmental, development.

1804805 Environmental Impact Assessment and Risk Assessment**3(3-0-6)***Prerequisite: None*

Principles of assessment of projects which may affect environment and health, techniques and process for analysis of environmental health impacts, related law and regulation, risk assessment and risk management.

1804806 Health Manpower Management and Development**3 (3-0-6)***Prerequisite: None*

Principles of human resource management and development in public health organizations; motivation, attitude, and job satisfaction; management of conflict, cooperation, and team building.

1804807 Public Health Administration and Policy**3(3-0-6)***Prerequisite: None*

Concept and theories of public health administration; decision making, planning, total quality control, leader and leadership development, supervision, monitoring and control. Policy modification, implementation, control and evaluation.

1804808 Community Nutrition**3(3-0-6)***Prerequisite: None*

Principles and concept of community nutrition, nutritional indicators, nutritional assessment, nutritional problems in the community, and solutions; planning, methods and evaluation.

1804809 Principles of Health Promotion**3(3-0-6)***Prerequisite: None*

Concept and principles of health promotion, assessment of risk population, factors effecting behavior changing, environmental management, health promotion, projects for health promotion; measurement and

1804810 Statistical Methods in Epidemiology**3(2-2-5)***Prerequisite: None*

Statistical analysis in epidemiological study, risk assessment, factors in epidemiological study, confounders and methods to control confounding factors, bias and bias management, statistical analysis methods e.g. Multiple Logistic Regression.

- 1804811 Management of Infectious Disease and Control 3(3-0-6)**
Prerequisite: None
 Principles and process of disease control, factors affecting disease control, process of infectious disease control in the community and in the health care service, disease control in the era of globalization, surveillance system, development and cooperation of report system in disease control.
- 1804812 Social Epidemiology 2(2-0-4)**
Prerequisite: None
 Theories of social epidemiology, health theories: illness, sickness, social determinants of health, disease and illness; human behaviors and health behaviors, health culture, mental illness.
- 1804813 Health and Human Rights 2(2-0-4)**
Prerequisite: None
 Human rights, human right and health in special population groups such as immigrants, low paid workers, Third gender, focusing on health care service and access.
- 1804814 Race, Ethnicity and Health 2(2-0-4)**
Prerequisite: None
 Effects of race, ethnicity, belief and religion on health, access to care, health care management with regards to the difference in race and local wisdom.
- 1804815 Natural Product Pharmacology 3(3-0-6)**
Prerequisite: None
 Pharmacokinetics, therapeutic use and toxicology of plants and natural products, principles of drug actions, drug metabolites, natural product derived drugs.
- 1804816 Ethno Botany 3(3-0-6)**
Prerequisite: None
 Plant systematic classification and nomenclature, plant evolution, plant cultivation, edible and toxic plants commonly found in Thai households.; plants used in folk medicine, culinary art and rites; plants of economic importance, sustainable use and management of botanical resources.
- 1804817 Public Health Seminar 2(2-0-4)**
Prerequisite: None
 Seminar in current public health topics of interest at local, national, or international levels, as a basis for student's thesis.



School of Anti-Aging and Regenerative Medicine

- ⊙ Master of Science Program In Dermatology
- ⊙ Master of Science Program In Anti-Aging and Regenerative Medicine
- ⊙ Master of Science Program In Anti-Aging and Regenerative Science

Master Program

School of Anti-Aging and Regenerative Medicine

Mae Fah Luang University

Since January 2008, The School of Anti-Aging and Regenerative Medicine, Mae Fah Luang University has set up and provides a M.Sc. and a PhD. program in Dermatology. Both programs are designed to create competent and potential doctors to conduct research on clinical dermatology and dermatological science. These programs will provide a good opportunity for the applicants to broaden their cosmetic dermatological knowledge and as such to gain a highly competitive edge for their future career.

Master of Science Program in Dermatology M.Sc. (Dermatology)

Master of Science Program in Dermatology provides the course to create component, potential and principal doctors to do the research on clinical dermatology and dermatological science. This will lead to get the new knowledge from the research that will be beneficial to the country. This program is available with two study plans.

Plan A (1): This plan requires students to take a non credit course in research seminar or other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan A (2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Master of Science Program in Anti-Aging and Regenerative Medicine M.Sc. (Anti-Aging and Regenerative Medicine)

Master of Science Program in Anti-Aging and Regenerative Medicine provides the course to create component, potential and principal doctors to do the research on Anti-Aging and Regenerative Medicine. This will lead to get the new knowledge from the research that will be beneficial to the country. This program is available with two study plans.

Plan A (1): This plan requires students to take a non credit course in research seminar or other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan B (2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.

Master of Science Program in Anti-Aging and Regenerative Science M.Sc. (Anti-Aging and Regenerative Science)

Master of Science Program in Anti-Aging and Regenerative Science provides the course to create component, potential and principal students to do the research on Anti-Aging and Regenerative Science. This will lead to get the new knowledge from the research that will be beneficial to the country. This program is available with two study plans.

Plan A (1): This plan requires students to take a non credit course in research seminar or other non-credit courses as the School deems necessary, in order to be trained in research methodology. Final requirements for graduation include thesis and defense thereof.

Plan B (2): This plan requires students to fulfill core courses, electives, and a thesis, as specified in the curriculum.



Master of Science Program in Dermatology

M.Sc. (Dermatology)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	36	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	36	Credits
Major Required Courses	24	Credits
Thesis	12	Credits

Course Requirements

1. Plan A(1)	36	Credits
2001804	Thesis	Cr(Le-Pr-SS)* 36 (0-108-36)
2. Plan A(2)	36	Credits
Major Required Courses	24	Credits
1702701	Applied Statistics and Research Methodology	Cr(Le-Pr-SS) 3 (3-0-6)
1702702	Advanced Cosmetic Science for Skin	9 (8-3-17)
2001700	Cosmetics Surgery	1 (1-0-2)
2001701	General Clinical Dermatology 1	1 (1-0-2)
2001702	General Clinical Dermatology 2	1 (1-0-2)
2001703	Dermatologic Clinic 1	1 (0-6-1)
2001704	Dermatologic Clinic 2	1 (0-6-1)
2001705	Dermatologic Case Seminar	1 (1-0-2)
2001706	Dermatologic Research Journal Seminar	1 (1-0-2)
2001707	Antiaging Medicine	1 (1-0-2)
2001708	Contact Dermatitis and Occupation Skin Diseases Clinic	1 (0-3-1)
2001709	Microscopic Dermatology	1 (0-6-1)
2001801	Dermatologic Clinic 3	1 (0-6-1)
2001802	Dermatologic Clinic 4	1 (0-6-1)
Thesis	12	Credits
2001803	Thesis	Cr(Le-Pr-SS)* 12 (0-36-12)



Master of Science Program in Anti-Aging and Regenerative Medicine

M.Sc. (Anti-Aging and Regenerative Medicine)

Curriculum

1. Plan A(1)	36	Credits
2. Plan A(2)	36	Credits

Curriculum Structure

1. Plan A(1)	36	Credits
Thesis	36	Credits
2. Plan A(2)	36	Credits
Major Required Courses	24	Credits
Thesis	12	Credits

Course Requirements

1. Plan A(1)

2002715	Applied Statistics and Research Methodology	36 Credits
2003715	Seminar in Anti-Aging and Regenerative Science	Cr (Le-Pr-SS)*
2003716	Journal Seminar in Anti-Aging and Regenerative Science	0 (1-3-3)
		0 (0-3-0)
		0 (0-3-0)

Thesis

2002801	Thesis	36 (0-108-0)
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2. Plan A(2)

2002716	Seminar in Anti-Aging and Regenerative Medicine	36 Credits
2002717	Journal Seminar in Anti-Aging and Regenerative Medicine	Cr (Le-Pr-SS)
		0 (0-3-0)
		0 (0-3-0)

Major Required Courses

2002701	Anti-Aging and Regenerative Medicine	24 Credits
2002702	Physiology of Hormone	Cr (Le-Pr-SS)
2002703	Anti-Aging Diagnostic and Therapeutic Intervention	2 (2-0-4)
2002704	Hormone	1 (1-0-2)
2002705	Environment and Occupational Disorder	1 (1-0-2)
2002706	Geriatric Medicine	2 (2-0-4)
2002707	Anti-Aging and Regenerative Medicine Clinic 1	1 (1-0-2)
2002708	Anti-Aging and Regenerative Medicine Clinic 2	2 (2-0-4)
2002709	Cosmetic Dermatology and Aging Skin	2 (2-0-4)
2002710	Nutrition	3 (2-3-5)
2002711	Alternative Medicine	2 (2-0-4)
2002712	Sport and Exercise	1 (1-0-2)
2002713	Life Style for Optimal Health	1 (1-0-2)
2002714	Applied Statistics and Research Methodology	2 (1-3-3)

Thesis

2002802	Thesis	12 Credits
		Cr (Le-Pr-SS)
		12 (0-36-0)



Master of Science Program in Anti-Aging and Regenerative Science

M.Sc. (Anti-Aging and Regenerative Science)

Curriculum

1. Plan A(1)	36 Credits
2. Plan A(2)	36 Credits
3. Plan B	36 Credits

Curriculum Structure

1. Plan A(1)	36 Credits
Thesis	36 Credits
2. Plan A(2)	36 Credits
Major Required Courses	24 Credits
Thesis	12 Credits
3. Plan B	36 Credits
Major Required Courses	30 Credits
Thesis	6 Credits

Course Requirements

1. Plan A(1)

2002715	Applied Statistics and Research Methodology	36 Credits
2003715	Seminar in Anti-Aging and Regenerative Science	Cr (Le-Pr-SS)*
2003716	Journal Seminar in Anti-Aging and Regenerative Science	0 (1-3-3)
		0 (0-3-0)
		0 (0-3-0)

2002801	Thesis Thesis	36 (0-108-0)
2. Plan A(2)		36 Credits Cr (Le-Pr-SS)
2002716	Seminar in Anti-Aging and Regenerative Medicine	0 (0-3-0)
2002717	Journal Seminar in Anti-Aging and Regenerative Medicine	0 (0-3-0)
Major Required Courses		24 Credits Cr (Le-Pr-SS)
2002701	Anti-Aging and Regenerative Medicine	2 (2-0-4)
2002702	Physiology of Hormone	1 (1-0-2)
2002703	Anti-Aging Diagnostic and Therapeutic Intervention	1 (1-0-2)
2002704	Hormone	2 (2-0-4)
2002705	Environment and Occupational Disorder	1 (1-0-2)
2002706	Geriatric Medicine	2 (2-0-4)
2002707	Anti-Aging and Regenerative Medicine Clinic 1	2 (0-6-2)
2002708	Anti-Aging and Regenerative Medicine Clinic 2	2 (0-6-2)
2002709	Cosmetic Dermatology and Aging Skin	2 (2-0-4)
2002710	Nutrition	3 (2-3-5)
2002711	Alternative Medicine	2 (2-0-4)
2002712	Sport and Exercise	1 (1-0-2)
2002713	Life Style for Optimal Health	1 (1-0-2)
2002714	Applied Statistics and Research Methodology	2 (1-3-3)
Thesis		12 Credits Cr (Le-Pr-SS)
2002802	Thesis	12 (0-36-0)
3. Plan B		36 Credits
Major Required Courses		30 Credits Cr (Le-Pr-SS)
2002710	Nutrition	3 (2-3-5)
2002711	Alternative Medicine	2 (2-0-4)
2002712	Sport and Exercise	1 (1-0-2)
2002713	Life Style for Optimal Health	1 (1-0-2)
2002714	Applied Statistics and Research Methodology	2 (1-3-3)
2003701	Anti-Aging and Regenerative Science	2 (2-0-4)
2003702	Science of Hormone	1 (1-0-2)
2003703	Application in Anti-Aging Science	1 (1-0-2)
2003704	Basic Knowledge of Physiology of the Hormones	2 (2-0-4)
2003705	Occupational and Environmental Effect to the Human Body	1 (1-0-2)
2003706	Prevention and Counseling for Aging Population	2 (2-0-4)
2003707	Laboratory in Anti-Aging and Regenerative Science Clinic 1	2 (0-2-4)
2003708	Laboratory in Anti-Aging and Regenerative Science Clinic 2	2 (2-0-4)
2003709	Basic Knowledge of Aesthetic Dermatology and Aging Skin Care	2 (2-0-4)
2003710	Supplementation in Anti-Aging and Regenerative Science	2 (2-0-4)
2003711	Basic Knowledge of Medicine for Health Practitioner	1 (1-0-2)
2003712	Basic Principle in Health Care and Sanitation	1 (1-0-2)
2003713	Seminar in Anti-Aging and Regenerative Science	1 (0-3-0)
2003714	Journal Seminar in Anti-Aging and Regenerative Science	1 (0-3-0)
Independent Study		6 Credits Cr (Le-Pr-SS)
2002803	Independent Study	6 (0-36-0)

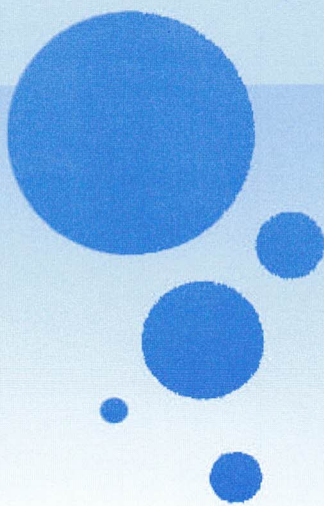
* Cr : Credits Le : Lecture Pr : Practice SS : Self Study

Descriptions:

School of Anti-Aging and Regenerative Medicine

- 1702701 Applied Statistics and Research Methodology 3(3-0-6)**
Overview of statistical concepts and methodology; questionnaire design; data collection; analysis and evaluation; application of results to industry and business.
- 1702702 Advanced Cosmetic Science for Skin 9(8-3-17)**
Structure and functions of skin; classification of skin conditions and skin problems; research and development for skin care products; importance and applications; formulation and evaluation; cosmetic laws; social issues related to cosmetic products; in vitro testing; animal and human testing; claim substantiation; sensory evaluation; marketing and business planning for skin cosmetic products; regulation of skin cosmetic products
- 2001700 Cosmetics Surgery 1(1-0-2)**
Skin structure; interaction of tissue reaction; wrinkle treatment and wound management; blepharoplasty, tissue regeneration and laser treatment.
- 2001701 General Clinical Dermatology 1 1(1-0-2)**
Signs and symptoms; pathology; causes; diagnosis and treatment of common skin diseases.
- 2001702 General Clinical Dermatology 2 1(1-0-2)**
Action of the drug and treatment in common skin diseases; signs and symptoms; pathology; causes; diagnosis and treatment of uncommon skin diseases.
- 2001703 Dermatologic Clinic 1 1(0-6-1)**
Anamnesis, physical examination of the skin and related systems, laboratory investigations for diagnosis, medical treatment, laser surgery for treatment of common skin diseases, etc.
- 2001704 Dermatologic Clinic 2 1(0-6-1)**
Anamnesis, physical examination of skin and other related systems; laboratory investigation for diagnosis; treatment of infectious skin diseases for instance: bacterial, leprosy, viral, HIV, mycobacterial, parasitic and sexually transmitted diseases.
- 2001705 Dermatologic Case Seminar 1(1-0-2)**
Diagnosis of the patients by working laboratory investigation, pathophysiology, journal club seminar and discussion of interesting cases, etc.
- 2001706 Dermatologic Research Journal Seminar 1(1-0-2)**
Analyze and discuss dermatologic publications; designing a thesis.
- 2001707 Antiaging Medicine 1(1-0-2)**
Theory of aging, healthy life styles, exercise, signs and symptoms of degenerative processes of humans including pathology, causes and diagnosis of aging conditions and related disorders.
- 2001708 Contact Dermatitis and Occupation Skin Diseases Clinic 1(0-3-1)**
Anamnesis, physical examination, prevention and treatment of contact dermatitis, occupational skin diseases including patch and prick tests and occupational skin diseases in industry.
- 2001709 Microscopic Dermatology 1(0-6-1)**
Histology of skin; sebaceous glands; sweat glands; endothelial cells; nerves; lymphatic systems in normal and pathological skin condition; use of microscopes and electron microscopes.
- 2001801 Dermatologic Clinic 3 1(0-6-1)**
Anamnesis; physical examination of skin and other skin diseases; laboratory investigation for diagnosis; treatment of skin disease, including consultation, for junior dermatologists, medical students and general physicians.

- 2001700 Cosmetics Surgery 1(1-0-2)**
Skin structure; interaction of tissue reaction; wrinkle treatment and wound management; blepharoplasty, tissue regeneration and laser treatment.
- 2001701 General Clinical Dermatology 1 1(1-0-2)**
Sign and symptoms; pathology; causes; diagnosis and treatment of common skin diseases.
- 2001702 General Clinical Dermatology 2 1(1-0-2)**
Action of the drug and treatment in common skin disease; signs and symptoms; pathology; causes; diagnosis and treatment of uncommon skin disease.
- 2001703 Dermatologic Clinic 1 1(0-6-1)**
Anamnesis, physical examination of the skin and related systems, laboratory investigation for the diagnosis, medical treatment, laser surgery for treatment of common skin disease, etc
- 2001704 Dermatologic Clinic 2 1(0-6-1)**
Anamnesis, physical examination of skin and other related systems; laboratory investigation for diagnosis; treatment of infectious skin disease for instance: bacterial, leprosy, viral, HIV, mycobacterial, parasitic and sexual transmitted disease.
- 2001705 Dermatologic Case Seminar 1(1-0-2)**
Diagnosis of the patient by working laboratory investigation, pathophysiology, journal club seminar and discussion of interesting cases, etc.
- 2001706 Dermatologic Research Journal Seminar 1(1-0-2)**
Analyze and discuss dermatologic publication; designing the student's thesis.
- 2001707 Antiaging Medicine 1(1-0-2)**
Theory of aging, healthy life style, exercise, sign and symptom of degenerative process of human including pathology, cause and diagnosis of aging condition and related disorder.
- 2001708 Contact Dermatitis and Occupational Skin Diseases Clinic 1(0-3-1)**
Anamnesis, physical examination, prevention and treatment of contact dermatitis, occupational skin disease including patch test and prick test and occupational skin disease in the factory.
- 2001709 Microscopic Dermatology 1(0-3-1)**
Histology of skin; sebaceous gland; sweat gland; endothelial cell; nerve; lymphatic system in normal and pathological skin condition; by using microscope and electron microscope.



School of Liberal Arts

⊗ Doctor of Philosophy Program In Social Sciences

Doctoral Program

School of Liberal Arts

Mae Fah Luang University

Doctor of Philosophy Program in Social Sciences

The primary aim of this interdisciplinary program is to produce graduates who are capable of developing abilities for research in social sciences, gaining depth and breadth of knowledge in social sciences and related fields, and preparing for intellectual leadership in social science contexts.

This program is available with one study plan.

Plan 2.1 : Courses study and Thesis/Dissertation (for Graduates)



Doctor of Philosophy Program in Social Sciences Ph.D. (Social Sciences)

Curriculum

Plan 2.1

Total Credit not less than 60 Credits

Curriculum Structure

Plan 2.1

Total Credit not less than 60 Credits

1) Major Required Courses

24 Credits

2) Dissertation

36 Credits

Course Requirements

Plan 2.1

60 Credits

1) Major Required Courses

24 Credits

Cr(Le-Pr-SS)*

1013902 Seminar on Social Sciences and Globalization

3 (3-0-6)

1013903 Seminar on Social Sciences Research 1

3 (3-0-6)

1013904 Seminar on Social Sciences Research 2

3 (3-0-6)

1013905 Reading in Specific Issues

6 (6-0-12)

1013908 Seminar on Social Sciences Theories

6 (6-0-12)

1013909 Dissertation Seminar

3 (3-0-6)

2) Dissertation

36 Credits

Cr(Le-Pr-SS)

1013910 Dissertation

36 (0-108-36)

* Cr : Credits

Le : Lecture

Pr : Practice

SS : Self Study

Descriptions ::

School of Liberal Arts

1013902 Seminar on Social Sciences and Globalization

3(3-0-6)

A study of change in the world, with emphases on issues of democratization; human rights; decentralization; free trade; changes in the environment and natural resources; and a survey of methodology, experience, conditions, problems and obstacles in both successful and unsuccessful cases of good governance for the purpose of establishing directions and methodologies for national development.

1013903 Seminar in Social Sciences Research 1

3(3-0-6)

A study of theories, concepts and methodology of quantitative research, including problem identification; research; review of theories and literature pertaining to framework development; hypothesizing; research designing; creation and testing of research tools; data collection; data analysis; conclusion; and discussion.

1013904 Seminar in Social Sciences Research 2

3(3-0-6)

A study of theories, concepts and methodology of qualitative research, including problem identification; researching; review of pertinent theories and literature; data collection methods including participatory observation, interviewing, group discussion and document analysis; qualitative analysis of data; conclusion; and discussion.

1013905 Readings in Specific Issues

6(6-0-12)

A survey of theories, concepts and research works pertaining directly and indirectly to the topic of students's interests in research; analyzing, critiquing and synthesizing information in order to classify and/or develop a research framework as a basis for writing academic articles for presentation at national or international symposia.

1013908 Seminar in Social Sciences Theories

6(6-0-12)

A survey and study of the status, scope and changes of social science concepts and theories; analysis and comparison of past, present and post-modern philosophies and theories of social sciences; concepts of ethics with reference to the hypotheses, patterns, values and philosophies established by each theory; analytical units; argumentation and critiquing; and exploitation of social science theories in Thai political, economic and social contexts.

1013909 Dissertation Seminar

3(3-0-6)

A synthesis of the knowledge acquired through course-work for the development of a dissertation proposal, which includes principal concepts and theories, as well as research planning, to produce an internationally acknowledged dissertation.

1013910 Dissertation

36(0-108-36)

Individual research undertaken by each student under guidance of appointed dissertation supervisors, involving submission of a dissertation and its defense as final requirements for graduation.



School of Management

⊗ Doctor of Philosophy Program In Natural Resources and
Environmental Management

Doctoral Program

School of Management

Mae Fah Luang University

Doctor of Philosophy Program in Natural Resources and Environmental Management (International Program)

The Ph.D Program in Natural Resources and Environmental Management is designed to develop human resources with good interdisciplinary knowledge and innovative research methodologies. Using English as the medium of instruction, it aims to facilitate original research and to devise effective and relevant approaches to solving problems in natural resource and environmental management (NREM) in the Greater Mekong Sub-region (GMS), including Thailand and neighboring countries with similar environments. The ultimate goal will be sustainable development.

The dissertation committee will include at least one external co-advisor from a reputable university in Asia or beyond, and the research outputs should be published in international, refereed journals. The research activities for doctoral students will focus particularly on problem solving in natural resource and environmental issues, usually involving local community participation, including natural resource conservation, and environmental protection across the region.

Through solving real-world problems, it is expected that the research will lead, for example, to the development of innovative environmental risk assessment methods, new concepts and ideas for eco-friendly industrial production, to create more rational and effective environmental protection and natural resource use policies. Research will involve cooperation with various national, regional, and international organizations. This Program is available through two study plans.

Plan 1.1: Thesis / Dissertation only (For Graduate Degree)

Plan 2.1: Courses study and Thesis / Dissertation (For Graduate Degree)



Doctor of Philosophy Program in Natural Resources and Environmental Management (International Program)

Ph.D. (Natural Resources and Environmental Management)

Curriculum

Plan 1.1	Total Credits not less than	48	Credits
Plan 2.1	Total Credits not less than	48	Credits

Curriculum Structure

Plan 1.1	48	Credits
1) Dissertation	48	Credits
Plan 2.1	48	Credits
1) Major Required Courses	12	Credits
2) Dissertation	36	Credits

Course Requirements

Plan 1.1	48	Credit
1208913 Dissertation	Cr(Le-Pr-SS)*	48 (0-144-48)
Plan 2.1	48	Credit
1) Major Required Courses	12	Credits
1208802 Natural Resources and Environmental Systems, and their Dynamics	Cr(Le-Pr-SS)	3 (3-0-6)
1208839 Socio-economic and Environmental Impact Assessment and Risk Management		3 (3-0-6)

1208840	Regulations, Policy and Planning of Natural Resources and Environment	3 (3-0-6)
1208901	Special Topic 1	1 (1-0-2)
1208902	Special Topic 2	1 (1-0-2)
1208903	Special Topic 3	1 (1-0-2)
1208904	Seminar	1 (1-0-2)
1208907	Proposal for Dissertation	1 (1-0-2)

2) Dissertation

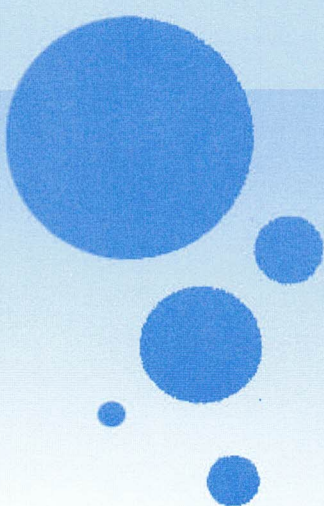
1208910	Dissertation	36 Credits Cr(Le-Pr-SS) 36 (0-108-36)
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* Cr : Credits
 Le : Lecture
 Pr : Practice
 SS : Self Study

Descriptions ::

School of Management

- 1208802 Natural Resources and Environmental Systems and their Dynamics 3(3-0-6)**
The importance of natural resources in the context of environmental systems; dynamic interactions among key components soil: water and air; natural resources in national and regional economies, relationships with the environment; trans-boundary issues; ecosystem management.
- 1208839 Socio-economic and Environmental Impact Assessment and Risk Management 3(3-0-6)**
Socio-economic and environmental impact assessment for soil, water, and air resources; urbanization, industrialization, and land use intensification considerations; risk assessment methodologies; trans-boundary issues, particularly for combined effects of impact.
- 1208840 Regulations, Policy, and Planning for Natural Resources and the Environment 3(3-0-6)**
Development and implementation of environmental regulations; effective approaches to pollution abatement; techniques for predicting the impact of emissions; policy and planning, and implementation strategies for regulation; trans-boundary issues, sustainable economic development and conservation.
- 1208904 Seminar 1(1-0-2)**
This requires seminar presentation to be shared among all PhD students.
- 1208906 Special Topic 1 1(1-0-2)**
This requires independent study on expected research topics intended for use in the dissertation.
- 1208902 Special Topic 2 1(1-0-2)**
This requires independent study on in-depth research methodologies intended for use in the dissertation.
- 1208903 Special Topic 3 1(1-0-2)**
This requires independent study on data systems management intended for use in the dissertation.
- 1208907 Proposal for Dissertation 1(1-0-2)**
This requires comprehensive preparation for the dissertation, including literature review, problem statement, research methodology, expected submission to, and presentation before the examination committee.
- 1208912 Dissertation 36(0-108-36)**
This requires independent research on NREM in the its. The thesis must have an element of originality and contribute to the body of knowledge and application. The thesis will be carried out under the supervision of the dissertation committee, including an external examiner.
- 1208913 Dissertation 48(0-144-48)**
This requires independent research on NREM in the its. The thesis must have an element of originality and contribute to the body of knowledge and application. The thesis will be carried out under the supervision of the dissertation committee, including an external examiner.



School of Science

- ⌘ Master of Science Program In Applied Chemistry
- ⌘ Master of Science Program In Biological Sciences
- ⌘ Master of Science Program In Biotechnology
- ⌘ Master of Science Program In Computational Sciences
- ⌘ Master of Science Program In Ceramic Industrial Technology
- ⌘ Master of Science Program In Material Science

School of Science

Mae Fah Luang University

Doctor of Philosophy Program in Applied Chemistry

Ph.D. (Applied Chemistry)

This program aims to produce personnel having academic excellence and research-development potential in the field of applied chemistry, which not only contributes to scientific and technological advancement but also puts the country on an equal footing with other countries and enables the country to compete in the international arena. This Program is available with two study plans.

Doctor of Philosophy Program in Biosciences

Ph.D. (Biosciences)

This program primarily provides educational support and development for bio-scientists in domestic organizations, especially those in the upper-northern region, enabling them to strive for academic excellence and capacity to develop the country to be on a par with other countries and to have a competitive edge in the field of biosciences. This Program is available with two study plans.

Doctor of Philosophy Program in Biotechnology

Ph.D. (Biotechnology)

This program emphasizes biotechnology as a multidisciplinary subject that plays an essential role in national development, especially in agricultural, industrial, medical, and environmental areas. This Program is available with two study plans.

Doctor of Philosophy Program in Computational Science

Ph.D. (computational Science)

This multidisciplinary program in computational science aims to develop personnel with skills to integrate knowledge of applied science, applied mathematics, computer science and other related disciplines. Simulation and computation by high-performance computers will be utilized so as to yield increased power for understanding, decision-making and predicting. This Program is available with two study plans.

Doctor of Philosophy Program in Materials Science

Ph.D. (Materials Science)

This program primarily aims to develop materials scientists with potential for taking initiatives, skills in forming hypotheses, and ability to plan and conduct research independently so as to generate new domains of knowledge which can culminate in socio-economically beneficial innovations. This Program is available with two study plans.

Plan 1.1: Thesis / Dissertation Only (For Graduate Degree)

Plan 1.2: Thesis / Dissertation Only (For Under Graduate Degree)

Plan 2.1: Course Study and Thesis / Dissertation (For Graduate Degree)

Plan 2.2: Course Study and Thesis / Dissertation (For Under Graduate Degree)



Doctor of Philosophy Program in Applied Chemistry

Ph.D. (Applied Chemistry)

Curriculum

Plan 1.1	Total Credits not less than	48	Credits
Plan 1.2	Total Credits not less than	72	Credits

Curriculum Structure

Plan 1.1	48	Credits
Thesis	48	Credits
Plan 1.2	72	Credits
Thesis	72	Credits

Course Requirements

Plan 1.1 With a Graduate Degree

1102991	Thesis	Cr(Le-Pr-SS)* 48 (0-144-48)
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Plan 1.2 Without a Graduate Degree

1102992	Thesis	Cr(Le-Pr-SS) 72 (0-216-72)
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Doctor of Philosophy Program in Biosciences

Ph.D. (Biosciences)

Curriculum

Plan 1.1	Total Credits not less than	48	Credits
Plan 1.2	Total Credits not less than	72	Credits

Curriculum Structure

Plan 1.1	48	Credits
Thesis	48	Credits
Plan 1.2	48	Credits
Thesis	72	Credits

Course Requirements

Plan 1.1 With a Graduate Degree

1105993	Thesis	Cr(Le-Pr-SS)* 48 (0-144-48)
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Plan 1.2 Without a Graduate Degree

1105994	Thesis	Cr(Le-Pr-SS) 72 (0-216-72)
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Doctor of Philosophy Program in Biotechnology

Ph.D. (Biotechnology)

Curriculum

Plan 1.1
Plan 1.2

Total Credits not less than
Total Credits not less than

48 Credits
72 Credits

Curriculum Structure

Plan 1.1
Ph.D. Thesis
Plan 1.1
Ph.D. Thesis

48 Credits
48 Credits
72 Credits
48 Credits

Course Requirements

Plan 1.1
With a Graduate Degree

1105991 Ph.D. Thesis

Cr(Le-Pr-SS)*
48 (0-144-48)

Plan 1.2
Without a Graduated Degree

1105992 Ph.D. Thesis

Cr(Le-Pr-SS)
72 (0-216-72)



Doctor of Philosophy Program in Computational Science

Ph.D. (Computational Science)

Curriculum

Plan 1.1
Plan 1.2

Total Credits not less than
Total Credits not less than

48 Credits
72 Credits

Curriculum Structure

Plan 1.1
Thesis

48 Credits
48 Credits

Plan 1.2
Thesis

72 Credits
72 Credits

Course Requirements

Plan 1.1
With a Graduate Degree

1106991 Thesis

Cr(Le-Pr-SS)*
48 (0-144-48)

Plan 1.2
Without a Graduate Degree

1106992 Thesis

Cr(Le-Pr-SS)
72 (0-216-72)



Doctor of Philosophy Program in Materials Science

Ph.D. (Materials Science)

Curriculum

Plan 1

Plan 1.1	Total Credits not less than	48	Credits
Plan 1.2	Total Credits not less than	72	Credits

Plan 2

Plan 2.1	Total Credits not less than	53	Credits
Plan 2.2	Total Credits not less than	76	Credits

Curriculum Structure

Plan 1.1

With a Graduate Degree Thesis	48	Credits
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Plan 1.2

Without a Graduate Degree Thesis	72	Credits
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Plan 2.1

With a Graduate Degree	53	Credits
1) Major Required Courses	13	Credits
2) Thesis	36	Credits
3) Seminar	4	Credits

Plan 2.2

Without a Graduate Degree	76	Credits
1) Major Required Courses	13	Credits
2) Major Elective Courses	11	Credits
3) Thesis	48	Credits
4) Seminar	4	Credits

Course Requirements

Plan 1.1

With a Graduate Degree	48	Credits
	Cr(Le-Pr-SS)	
1108991 Thesis	48	(0-144-48)

Plan 1.2

Without a Graduate Degree	72	Credits
	Cr(Le-Pr-SS)	
1108992 Thesis	72	(0-216-72)

Plan 2.1

1) Major Required Courses	13	Credits
	Cr(Le-Pr-SS)	
1108701 Introduction to Materials Science and Engineering	3	(3-0-6)
1108711 Characterization of Materials	4	(3-3-7)
1108713 Properties of Materials	3	(3-0-6)
1108715 Materials Chemistry	3	(3-0-6)

2) Major Elective Courses

	36	Credits
	Cr(Le-Pr-SS)	
1104741 Solid State Physics	3	(3-0-6)
1106751 Advanced Mathematics for Materials Science	3	(3-0-6)
1108712 Advanced Characterization of Materials	3	(3-0-6)
1108714 Mechanical Properties of Materials	3	(3-0-6)
1108716 Introduction to Crystallography	3	(3-0-6)
1108717 Computational Materials Science	3	(2-3-5)

1108718	Materials for Biomedical Applications	3 (3-0-6)
1108721	Thermodynamics and Kinetics	3 (3-0-6)
1108722	Extraction and Refining	3 (3-0-6)
1108723	Corrosion and Surface Engineering	3 (3-0-6)
1108724	Phase Transformations	3 (3-0-6)
1108725	Mechanical Behavior and Structure Property Relationships	3 (3-0-6)
1108726	Industrial Alloys and their Processing	3 (3-0-6)
1108731	Ceramic Processing Technology	4 (3-3-7)
1108732	Structure and Properties of Ceramics	3 (3-0-6)
1108733	Defects in Ceramic Products	3 (2-3-5)
1108734	Ceramics Design	3 (3-0-6)
1108741	Polymer Synthesis	3 (3-0-6)
1108742	Structure and Physical Properties of Polymers	3 (3-0-6)
1108743	Polymer Laboratory	1 (0-3-1)
1108744	Polymer Processing	3 (3-0-6)
1108745	Specialty Polymers	2 (2-0-4)
1108751	Composite Materials	3 (3-0-6)

3)Thesis With a Graduate Degree

1108993 Thesis

36 Credits
Cr(Le-Pr-SS)
36 (0-108-36)

Plan 2.2 Without a Graduate Degree

1108994 Thesis

48 Credits
Cr(Le-Pr-SS)
48 (0-144-48)

4)Seminar

1108981	Seminar in Materials Science 1
1108982	Seminar in Materials Science 2
1108983	Seminar in Materials Science 3
1108984	Seminar in Materials Science 4

4 Credits
Cr(Le-Pr-SS)
1 (0-3-1)
1 (0-3-1)
1 (0-3-1)
1 (0-3-1)

* Cr : Credits
Le : Lecture
Pr : Practice
SS : Self Study

Descriptions::

School of Science

1102991 Thesis

48(0-144-48)

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a thesis and thesis defense as final requirements for graduation.

1102992 Thesis

72(0-216-72)

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a thesis and thesis defense as final requirements for graduation.

1105993 Thesis

48(0-144-48)

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a Thesis and Thesis defense as final requirements for graduation.

1105994 Thesis

72(0-216-72)

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a Thesis and Thesis defense as final requirements for graduation.

1105991 PhD Thesis

48(0-144-48)

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a PhD Thesis and PhD Thesis defense as final requirements for graduation.

1105992 PhD Thesis

72(0-216-72)

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a PhD Thesis and PhD Thesis defense as final requirements for graduation.

1106991 Thesis

48(0-144-48)

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a Thesis and Thesis defense as final requirements for graduation.

1106992 Thesis

72(0-216-72)

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a Thesis and Thesis defense as final requirements for graduation.

1108701 Introduction to Materials Science and Engineering

3(3-0-6)

An introductory course aiming to set up strong foundations in the field of Materials Science and Engineering for graduate students whose backgrounds are in different disciplines. The reasons for the emergence as well as the characteristics of this subject branch are discussed. Comparison between various classes of materials and also their unique engineering applications are covered. Relationships between structure – properties and processing parameters of selected key materials are emphasized.

1108711 Characterization of Materials

4(3-3-7)

Structural characterization of materials with information obtaining from light microscopy, X-ray diffraction (XRD), scanning electron microscopy (SEM), and thermal analysis techniques. Sample preparation for microscopy analysis. Chemical composition analysis includes X-ray spectroscopy (EDX) and X-ray fluorescence spectroscopy (XRF). Particle size and molecular weight determination. Density measurement. Standard test methods for mechanical properties evaluation: stress-strain curves of various materials; flexural strength, toughness etc.]

1108712 Advanced Characterization of Materials**3(3-0-6)***Prerequisite :* 1108711

Electrical testing techniques, such as the impedance spectroscopy technique. Surface analysis techniques, such as Auger, ESCA. Molecular spectroscopic techniques: NMR, IR, UV, and Raman Spectroscopy.

1108713 Properties of Materials**3(3-0-6)**

The difference in atomic structures, bonding types, and microstructures that gives rise to the diversity of physical properties of various materials. These physical properties include optical, thermal, mechanical, magnetic, and electrical properties. Comparison between predicted values and reported experimental data.

1108714 Mechanical Properties of Materials**3(3-0-6)**

Mechanical behavior of materials based on atomic and micro structural considerations; elasticity, plasticity, yield criteria. Introduction to dislocation theory. Brittle and ductile fracture, fatigue and creep, design criteria, statistical aspect of failure, remaining life prediction and life extension methods. Dynamic and temperature effects. Crack initiation and propagation. Creep, hydrogen and radiation embrittlement, stress corrosion cracking, and wear.

1108715 Materials Chemistry**3(3-0-6)**

Molecular understanding of materials properties. Structures of atoms – quantum chemistry. Thermodynamics and kinetics. Rate laws and diffusion of materials. Symmetry aspects of chemical bonding of molecules. Materials classes including modern examples of polymers, organic semiconductors, ceramics, organic-inorganic hybrids, superconductors, and nano-technology.

1108716 Introduction to Crystallography**3(3-0-6)**

Crystal structures and symmetry. Crystal planes and directions; describing lattice planes and directions in crystals; stereographic projections. Point group and symmetry, Space group, reciprocal lattice, Weiss zone law, Structure factor.

1108717 Computational Materials Science**3(2-3-5)**

Review the theoretical aspects of various physical phenomena of major importance to materials scientists. Develop mathematical models from these theories, and construct qualitative solution procedures based on analytical and numerical techniques.

1108718 Materials for Biomedical Applications**3(3-0-6)**

Introduction to the interactions between cells and surfaces of biomaterials. Surface chemistry and physics of selected metals, polymers, and ceramics. Surface characterization methodology. Modification of biomaterials surfaces. Biosensors and microarrays. Acute and chronic responses to implanted biomaterials. Topics in biomimetics, drug delivery, and tissue engineering. Laboratory demonstrations.

1108721 Thermodynamics and Kinetics**3(3-0-6)**

Review of the fundamental concepts of thermodynamics in relation to the physico-chemical behavior of metallic materials: Enthalpy, Entropy, Free Energy, Chemical Equilibrium, concepts of Activity, Ellingham diagrams, etc. Thermodynamics of solutions, ideal and non-ideal solutions. Use of thermodynamic data in analysis and prediction of phase diagrams, e.g., eutectic and peritectic reactions, spinodal decomposition. Nucleation and growth during phase transformations. Gases in metals. Review of reaction kinetics: factors influencing rates of reaction, experimental rate laws, order of reaction, use of Arrhenius equation.

1108722 Extraction and Refining**3(3-0-6)**

Overview of extraction process routes: ore preparation and mineral dressing, pyrometallurgy, hydrometallurgy, electrometallurgy. Slags and their chemistry: functions, properties, structures and slag-metal reactions. Principles underlying efficient metal melting and recycling. Review of production of selected ferrous and non-ferrous metals: Ferrous - iron making, primary and secondary steel making processes, ladle treatments, vacuum processing. Non-ferrous - zinc, copper, aluminum, magnesium, titanium. This review will include the application of thermodynamic and kinetic principles to selected reactions.

1108723 Corrosion and Surface Engineering 3(3-0-6)

Thermodynamics and kinetics of high temperature corrosion: use of Ellingham diagrams, mechanisms and rate laws of oxide growth, coatings and atmosphere control to prevent oxidation and other forms of attack such as carburization, sulphidation, etc. Thermodynamics and kinetics of aqueous corrosion: electrode potential, Nernst equation, Pourbaix diagrams, Evans diagrams for passivating and non-passivating metals. Activation and concentration polarization. Use of potentiostat and other electrochemical tests. Forms of corrosion including mechanisms and methods of prevention. Overview of factors affecting aqueous corrosion: design, materials usage, environment, service conditions, etc. The influence and interaction of stresses and wear on corrosion: Stress corrosion cracking, corrosion fatigue, cavitations, erosion, etc. Outline of various forms of wear with particular reference to abrasion.

1108724 Phase Transformations 3(3-0-6)

Review of binary and simple ternary phase equilibrium to include: Energy-composition relationships in selected binary system, Non-equilibrium effects in alloys. Diffusion mechanisms and their role in solid state transformations. Factors affecting nucleation and growth processes in solidification and in solid state transformations. Fundamental principles underlying the decomposition of solid solutions via eutectoid, spinodal, and precipitation reactions. Formation of transition phases and particle growth. Structural changes during annealing of cold-worked metals. The nature and characteristics of martensite and bainite formation. Isothermal, athermal and continuous cooling transformations. Factors affecting transformation rates.

1108725 Mechanical Behavior and Structure Property Relationships 3 (3-0-6)

Overview of origins and effects of lattice defects. Stress-strain behavior and factors affecting yield strength. Strengthening mechanisms: grain refinement, solution hardening, precipitation, dispersion, and fibre strengthening. Effects of texture on mechanical behavior. Fracture processes: micro mechanisms of ductile and brittle behavior, fatigue failure and creep damage. Introduction to fracture toughness. Metallurgical factors affecting fatigue and creep behavior. An introduction to the application of the principles of transformation characteristics and mechanical behavior to design and control of properties in commercial alloys.

1108726 Industrial Alloys and their Processing 3(3-0-6)

The control of structure and properties in industrial alloys by alloy design and by correct selection and optimization of processing conditions. In each case the scientific principles underlying the development of microstructure during processing is considered.

1108731 Ceramic Processing Technology 4(3-3-7)

Powder processing routes of ceramic raw materials including clay minerals, and inorganic chemicals widely used in ceramic industry. The use of processing additives. Particle packing characteristics. Rheology of suspension and slurries. Milling, separation, and granulation of particles. Science and technology of forming processes, e.g. pressing, plastic forming, slip, gel, and tape casting; post forming processes including drying, firing technology; and finishing.

1108732 Structure and Properties of Ceramics 3(3-0-6)

Chemical bonding in ceramic materials. Crystal structures of ceramics and structures of glasses. Point defects and relation to non-stoichiometry. Line defects and grain boundaries. Diffusion in ionic materials and its relation to point defect structure. Phase diagrams and phase transformation. Kinetics of solid state reaction, atomic diffusion, grain growth and sintering. Discussion of the effects of micro-structural characteristics on mechanical, electrical, magnetic, thermal, and optical properties of ceramic materials.

1108733 Defects in Ceramic Products 3(2-3-5)

Types of clay minerals and some selected raw materials (montmorillonite, illite, kaolinite, halloysite etc); their structures and related properties. Glazes and enamels: batch calculations and modifications. Effects of firing on phase and micro-structural changes of clay bodies and glazes. Ceramic colorants. Ceramic faults and their possible causes. Processes in defect investigations and case studies.

- 1108734 Ceramics Design 3(3-0-6)**
Design technology and materials selection. Methodology and acquisition of skills in the origin and development of product design using traditional and computational-based tools. An overview of ceramic design will be introduced. Analysis of product design and issues that impact on creative process such as production constraints, technological implications, price points, brand awareness, and market demands are addressed.
- 1108741 Polymer Synthesis 3(3-0-6)**
Basic definitions and nomenclature of polymers. Molecular architecture and classification of polymers. Molecular mass and degree of polymerization. The methods for polymer synthesis including step-growth polymerization, free-radical polymerization, ionic polymerization, copolymerisation, stereoregular polymerization, as well as novel methods for polymer synthesis.
- 1108742 Structure and Physical Properties of Polymers 3(3-0-6)**
Structure-properties relationships in polymers including; macromolecules in solution, transport measurements, polymer crystals, semi-crystalline and amorphous polymers, crystallization and melting, viscoelasticity, rubber elasticity yield and deformation in polymers and fracture mechanics.
- 1108743 Polymer Laboratory 1(0-3-1)**
Experiments on various methods of polymerisation. The study of kinetics and mechanisms involved. Analytical methods for studying polymer properties, such as molecular mass and molar mass distribution determination, thermal analysis techniques, and chemical properties.
- 1108744 Polymer Processing 3(3-0-6)**
Various aspects regarding processing techniques of plastics and rubbers are discussed. These includes injection moulding, extrusion and down-stream techniques, compression moulding, twin-screen extrusion, reaction injection moulding, and other modern techniques used in the industry.
- 1108745 Specialty Polymers 2 (2-0-4)**
Polymers that have special functions in applications, such as medical, agricultural, sports and engineering. Advanced polymers in aviation and space technology and nano-technology are also discussed.
- 1108751 Composite Materials 3(3-0-6)**
Basic concepts of composites. Constituents materials for composites. Structure and mechanical behavior of composites. Fabrication processes, such as autoclaving, compression molding, filament winding, thermoplastic molding, etc. Mechanical testing of composites and their constituents.
- 1108981 Seminar in Materials Science 1 1(0-3-1)**
This purpose of this the seminar is to give students opportunity to present the advancement of their research activities and also exchange ideas with experienced researchers.
- 1108982 Seminar in Materials Science 2 1(0-3-1)**
This purpose of this the seminar is to give students opportunity to present the advancement of their research activities and also exchange ideas with experienced researchers.
- 1108983 Seminar in Materials Science 3 1(0-3-1)**
This purpose of this the seminar is to give students opportunity to present the advancement of their research activities and also exchange ideas with experienced researchers.
- 1108984 Seminar in Materials Science 4 1(0-3-1)**
This purpose of this the seminar is to give students opportunity to present the advancement of their research activities and also exchange ideas with experienced researchers.
- 1108991 Thesis 48(0-144-48)**
Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a Thesis and Thesis defense as final requirements for graduation.

1108992 Thesis**72(0-246-72)**

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a Thesis and Thesis defense as final requirements for graduation.

1108993 Thesis**36(0-108-36)**

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a Thesis and Thesis defense as final requirements for graduation.

1108994 Thesis**48(0-144-48)**

Individual research undertaken by each student under the guidance of appointed dissertation supervisors, which involves submission of a Thesis and Thesis defense as final requirements for graduation.



School of Agro-Industry

⊙ Doctor of Philosophy Program In Food Technology

Doctoral Program

School of Agro-Industry

Mae Fah Luang University

Doctor of Philosophy Program in Food Technology Ph.D. (Food Technology)

The Food Technology program is interdisciplinary that prepares the student to be a specialist for research in a specialized field of food technology. It also provides the new knowledge for students interested in applying food science and technology to the theoretical and practical aspects of the entire food chain.



Doctor of Philosophy Program in Food Technology Ph.D. (Food Technology)

Curriculum

Plan 1

Plan 1.1	48	Credits
Plan 1.2	72	Credits

Plan 2

Plan 2.1	48	Credits
Plan 2.2	72	Credits

Curriculum Structure

Plan 1.1

With Graduate Degree		
1) Dissertation	48	Credits

Plan 1.2

Without Graduate Degree		
1) Dissertation	72	Credits

Plan 2.1

With a Graduate Degree	48	Credits
1) Foundation Courses	6	Credits
2) Major Elective Courses	6	Credits
3) Dissertation	36	Credits

Plan 2.2

Without a Graduate Degree	72	Credits
1) Foundation Courses	9	Credits
2) Major Required Courses	9	Credits
3) Major Elective Courses	6	Credits
4) Thesis	48	Credits

Course Requirements

Plan A 1.1

With a Graduate Degree

48 Credits

1403991 Dissertation

Cr (Le-Pr-SS)*
48 Credits

Plan A 1.2

Without Graduate Degree

1403992 Dissertation

Cr (Le-Pr-SS)*
72 Credits

Plan A 2.1

With a Graduate Degree

48 Credits

1) Foundation Courses

6 Credits

Cr (Le-Pr-SS)

1402981 Research and Development in Food Technology

3 (3-0-6)

1403981 Seminar 1

1 (0-3-1)

1403982 Seminar 2

1 (0-3-1)

1403983 Seminar 3

1 (0-3-1)

2) Major Elective Courses

6 Credits

Cr (Le-Pr-SS)

1402721 Advanced Food Chemistry

3 (2-3-5)

1402822 Functional Foods

3 (2-3-5)

1402824 Advanced Instrumental Analysis for Research

3 (2-3-5)

1402825 Functional Properties of Food

3 (2-3-5)

1402891 Selected Topics in Food Chemistry

3 (3-0-6)

1402711 Advanced Food Microbiology

3 (2-3-5)

1402712 Food Toxicology

3 (2-3-5)

1402763 Microbiological Risk Assessment

3 (2-3-5)

1402892 Selected Topics in Food Safety

3 (3-0-6)

1403711 Food Biotechnology

3 (3-0-6)

1403712 Advanced Fermentation Technology

3 (3-0-6)

1403713 Advanced Food Enzyme Technology

3 (2-3-5)

1403891 Selected Topics in Food Biotechnology

3 (3-0-6)

1404751 Advanced Food Processes

3 (3-0-6)

1404752 Shelf Life Prediction for Food Products

3 (2-3-5)

1404754 Food Texture and Rheology

3 (2-3-5)

1404755 Physical and Engineering Properties of Food and Biomaterials

3 (2-3-5)

1404891 Selected Topics in Food Processing and Engineering

3 (3-0-6)

1406761 Sensory Evaluation for Product Development

3 (2-3-5)

1406764 Experimental Design in Product Development

3 (3-0-6)

1406765 Ingredients in Product Development

3 (2-3-5)

1406861 Advanced Product Development

3 (2-3-5)

1406891 Selected Topics in Product Development

3 (3-0-6)

1402722 Technology of Food Proteins

3 (2-3-5)

1402723 Technology of Carbohydrates

3 (2-3-5)

1402724 Technology of Fat and Oil

3 (2-3-5)

1402725 Food Biochemistry Laboratory Techniques

3 (2-3-5)

1402726 Food Additives

3 (2-3-5)

1402741 Principles in Food Science and Technology

4 (4-0-8)

1402762 Food Industrial Microbiology

3 (2-3-5)

1402811 Molecular Toxicology

2 (2-0-4)

1402823 Flavour Technology

3 (2-3-5)

1402861 Problem Solving and Decision Making in food Industry

2 (2-0-4)

1404851 Tea and Coffee Technology

3 (2-3-5)

1404852 Food Structure

3 (2-3-5)

1406762 Quality Control Design in Agro-Industry

2 (2-0-4)

1406763 Consumer Technology

3 (3-0-6)

1406862 Supply Chain and Logistics Management for Food Industry

2 (2-0-4)

1408741 Advanced Food Packaging

3 (2-3-5)

3) Dissertation		36 Credits
1403993	Dissertation	Cr (Le-Pr-SS) 36 (0-108-0)
Plan A 2.2		72 Credits
Without a Graduate Degree		
1) Foundation Courses		9 Credits
		Cr (Le-Pr-SS)
1106781	Advanced Statistics and Experimental Design	3 (3-0-6)
1402981	Research and Development in Food Technology	3 (3-0-6)
1403981	Seminar 1	1 (0-3-1)
1403982	Seminar 2	1 (0-3-1)
1403983	Seminar 3	1 (0-3-1)
2) Major Required Courses		9 Credits
		Cr (Le-Pr-SS)
1402824	Advanced Instrumental Analysis for Research	3 (2-3-5)
1402824	Advanced Instrumental Analysis for Research	3 (2-3-5)
1402721	Advanced Food Chemistry	3 (2-3-5)
1402822	Functional Foods	3 (2-3-5)
1402825	Functional Properties of Food	3 (2-3-5)
1402891	Selected Topics in Food Chemistry	3 (3-0-6)
1402711	Advanced Food Microbiology	3 (2-3-5)
1402712	Food Toxicology	3 (2-3-5)
1402763	Microbiological Risk Assessment	3 (2-3-5)
1402892	Selected Topics in Food Safety	3 (3-0-6)
1403711	Food Biotechnology	3 (3-0-6)
1403712	Advanced Fermentation Technology	3 (3-0-6)
1403713	Advanced Food Enzyme Technology	3 (2-3-5)
1403891	Selected Topics in Food Biotechnology	3 (3-0-6)
1404751	Advanced Food Processes	3 (3-0-6)
1404752	Shelf Life Prediction for Food Products	3 (2-3-5)
1404754	Food Texture and Rheology	3 (2-3-5)
1404755	Physical and Engineering Properties of Food and Biomaterials	3 (2-3-5)
1404891	Selected Topics in Food Processing and Engineering	3 (3-0-6)
1406761	Sensory Evaluation for Product Development	3 (2-3-5)
1406764	Experimental Design in Product Development	3 (3-0-6)
1406765	Ingredients in Product Development	3 (2-3-5)
1406861	Advanced Product Development	3 (2-3-5)
1406891	Selected Topics in Product Development	3 (3-0-6)
3) Major Elective Courses		6 Credits
		Cr (Le-Pr-SS)
1402722	Technology of Food Proteins	3 (2-3-5)
1402723	Technology of Carbohydrates	3 (2-3-5)
1402724	Technology of Fat and Oil	3 (2-3-5)
1402725	Food Biochemistry Laboratory Techniques	3 (2-3-5)
1402726	Food Additives	3 (2-3-5)
1402741	Principles in Food Science and Technology	4 (4-0-8)
1402762	Food Industrial Microbiology	3 (2-3-5)
1402811	Molecular Toxicology	2 (2-0-4)
1402823	Flavour Technology	3 (2-3-5)
1402861	Problem Solving and Decision Making in food Industry	2 (2-0-4)
1404851	Tea and Coffee Technology	3 (2-3-5)
1404852	Food Structure	3 (2-3-5)
1406762	Quality Control Design in Agro-Industry	2 (2-0-4)
1406763	Consumer Technology	3 (3-0-6)
1406862	Supply Chain and Logistics Management for Food Industry	2 (2-0-4)
1408741	Advanced Food Packaging	3 (2-3-5)
4) Thesis		48 Credits
		Cr (Le-Pr-SS)
1403994	Dissertation	48 (0-144-0)

Descriptions:

School of Agro-Industry

1402725 Food Biochemistry Laboratory Techniques

3(2-3-5)

Theory and techniques for food biochemical laboratory; sample preparation, extraction, isolation and purification; analysis and characterization of biomaterials by various techniques.

1402741 Principles in Food Science and Technology

4(4-0-8)

Introduction; principles in food chemistry, food microbiology, food engineering and food processing; related issues in food science and technology; case studies.

1402762 Food Industrial Microbiology

3(2-3-5)

Industrial microorganisms, factors affecting microbial growth and yield; fermentation process; applications of biochemistry and genetics to increase industrial yield; improvement and selection of strain; utilizations of microorganisms in food industry.

1402763 Microbiological Risk Assessment

3(2-3-5)

Comprehensive overview of microbiological risk assessment as management tool for safety consumption; understanding three components, risk assessment, risk management, risk communication; case study from outbreak data; design, development, creating model and implementation of microbiological risk assessment

1402824 Advanced Instrumental Analysis for Research

3(2-3-5)

The course involves recent techniques and instruments in chemical, physical and microbial analysis of foods and applications of selected instrumental techniques such as spectroscopy, chromatography, isolation and purification of protein, gel electrophoresis and scanning electron microscopy, electrochemical sensor, biosensor, non-destructive methods etc.

1402825 Functional Properties of Food

3(2-3-5)

Functional properties of carbohydrates, proteins, and lipids; mechanism of their functions in food systems; interactions between these compositions in foods; roles of food ingredient interactions on food stability.

1402981 Research and Development in Food Technology

3(3-0-6)

Concepts and approaches for research project in food technology; planning and management of the research; research process and techniques; proposal development for research fund; data collection, analysis and assessment; report and article writing for publication; technology transfer to manufacturers; review and evaluate innovation and advance in food science and technology; present and submit a concise report in a written paper.

1403981 Seminar 1

1(0-3-1)

Study and selection of currently interesting research issues in food technology or related area; oral presentation with report submission; dissertation proposal development, preparation and presentation.

1403982 Seminar 2

1(0-3-1)

Presentation of dissertation progress with report submission.

1403983 Seminar 3

1(0-3-1)

Presentation of dissertation progress with report submission.

1403991 Dissertation

48(0-144-0)

Research on a food technology related topic pertinent to individual interest under the supervision and approval of advisory committee; progression of the research work must be presented in every semester of his/her dissertation enrollment; dissertation must be presented and submitted after completion.

1403992 Dissertation**72(0-216-0)**

Research on a food technology related topic pertinent to individual interest under the supervision and approval of advisory committee; progression of the research work must be presented in every semester of his/her dissertation enrollment; dissertation must be presented and submitted after completion.

1403993 Dissertation**36(0-108-0)**

Research on a food technology related topic pertinent to individual interest under the supervision and approval of advisory committee; progression of the research work must be presented in every semester of his/her dissertation enrollment; dissertation must be presented and submitted after completion.

1403994 Dissertation**48(0-144-0)**

Research on a food technology related topic pertinent to individual interest under the supervision and approval of advisory committee; progression of the research work must be presented in every semester of his/her dissertation enrollment; dissertation must be presented and submitted after completion.

1404755 Physical and Engineering Properties of Food and**3(2-3-5)**

Physical and engineering properties of food and biomaterials; thermal properties, electrical properties, rheological properties, surface properties, optical properties, phase transition in foods; application of these properties in processing, storage and quality evaluation of foods and biomaterials.

1406764 Experimental Design in Product Development**3(3-0-6)**

Introduction; importance of experimental design in product development; experimental design concept; statistic in product development; data analysis by using computer program and case studies.

1406765 Ingredients in Product Development**3(2-3-5)**

Properties and functions of major and minor ingredients; changes of ingredient properties in food during processing; selection and suitable ingredients for new product development.

1407742 Postharvest Technology of Cereals and Legumes**3(2-3-5)**

Characteristics and quality of cereal grains and legumes; systems and methods for postharvest handling; drying and storage operations; interrelationship of temperature, moisture, molds and insects in grains and legumes during storage; biochemical and nutritive changes during storage; facilities management; pests control; milling and milling products; utilization of grains and legumes; field trips to milling and related processing plants.

1407743 Postharvest Handling System of Ornamental Plants**3(2-3-5)**

Postharvest physiology; handling and technology of cut flowers and cut foliages; post-production management technology and physiology of potted ornamentals; treatment for improving the longevity and quality of flowers; packinghouse operation and packaging systems; commercial ornamental productions; current issues.

1407750 Postharvest Operations Engineering**3(2-3-5)**

Pre- and postharvest loss of agricultural produces; engineering aspects and quality components; postharvest handling systems; design of systems and facilities; principles of postharvest operations engineering; postharvest equipments; cleaning; heat loads in agricultural produce, pre-cooling; threshing, separation and sorting; grain drying and storage; milling processes; recent developments and trends in postharvest technology.

1407761 Management of Agricultural Produce for Trade and Export**3(3-0-6)**

Agricultural commodities and food products for trade; problems of agricultural and food products; marketing policies; rules, regulation and restriction of export-import; documentations; customs procedure; government offices and private organizations relating to export-import business; quality standard and quality management system of agricultural and food products; packing, handling and transporting; field trips to export-import market and related organizations.

1407790 Seminar in Technology Management of Agricultural Produces 1(0-3-1)
Literature search and preparation; presentation and discussion; Thesis proposal development, preparation and presentation.

1407840 Postharvest Technology of Tea, Coffee and Cocoa 3(2-3-5)
Economic importance of tea, coffee and cocoa; pre- and postharvest handling; factors affecting pre- and postharvest handling; drying and storage of dried products; field trip and training in processing plant.

1407841 Selected Topics in Technology Management of Agricultural Produces 1(0-3-1)
Discussion and lectures on special aspects or advanced topics in technology management of agricultural produces which are not included in other courses. Topics will be announced in a given semester.

1407842 Packaging Technology for Agricultural Produces 3(2-3-5)
Physical and chemical properties of packaging materials; permeability and product shelf life of fresh produce; form of packaging for fresh produces; converting technology of materials in packaging; packing system and transportation system for fresh produces; development packaging for produces.

1408741 Advanced Food Packaging 3(2-3-5)
Advanced food packaging and filling technology i.e., flexible packaging, microwave packaging, smart packaging, active packaging; advanced techniques in modified atmosphere packaging; advanced technique in control of food packaging processed at high temperature; advanced technique in analysis and inspection of food packaging; laws and safety issues related to food packaging.

School of Anti-Aging and Regenerative Medicine

⊗ Doctor of Philosophy Program In Dermatology

Doctoral Program

School of Anti-Aging and Regenerative Medicine

Mae Fah Luang University

Since January 2008, The School of Anti-Aging and Regenerative Medicine, Mae Fah Luang University has set up and provides a M.Sc. and a PhD. program in Dermatology. Both programs are designed to create competent and potential doctors to conduct research on clinical dermatology and dermatological science. These programs will provide a good opportunity for the applicants to broaden their cosmetic dermatological knowledge and as such to gain a highly competitive edge for their future career.

Doctor of Philosophy Program in Dermatology Ph.D. (Dermatology)

Doctor of Philosophy Program in Dermatology has provided the course to create component, potential and principal doctors to do the research on clinical dermatology and dermatological science. This will lead to get the new knowledge from the research that will be beneficial to the country. This Program is available with two study plans.

Plan 1.1: Thesis / Dissertation Only (For Graduate Degree)

Plan 2.1: Course Study and Thesis / Dissertation (For Graduate Degree)



Doctor of Philosophy Program in Dermatology Ph.D. (Dermatology)

Curriculum

Plan 1.1	48	Credits
Plan 2.1	48	Credits

Curriculum Structure

Plan 1.1		
With a Graduate Degree	48	Credits
Dissertation	48	Credits
Plan 2		
With a Graduate Degree	48	Credits
Major Required Courses	3	Credits
Major Elective Courses	9	Credits
Dissertation	36	Credits

Course Requirements

Plan 1.1	
With a Graduate Degree	

2001910	Dissertation	Cr(Le-Pr-SS)* 48 (0-144-48)
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Plan 2.1**Core Courses**

		Cr(Le-Pr-SS)
2001700	Cosmetics Surgery	1 (1-0-2)
2001701	General Clinical Dermatology 1	1 (1-0-2)
2001702	General Clinical Dermatology 2	1 (1-0-2)
2001703	Dermatologic Clinic 1	1 (0-6-1)
2001704	Dermatologic Clinic 2	1 (0-6-1)
2001705	Dermatologic Case Seminar	1 (1-0-2)
2001706	Dermatologic Research Journal Seminar	1 (1-0-2)
2001707	Antiaging Medicine	1 (1-0-2)
2001708	Contact Dermatitis and Occupation Skin Diseases Clinic	1 (0-3-1)
2001709	Microscopic Dermatology	1 (0-6-1)
2001801	Dermatologic Clinic 3	1 (0-6-1)
2001802	Dermatologic Clinic 4	1 (0-6-1)

Major Required Courses

		Cr(Le-Pr-SS)
2001901	Applied Epidemiology	1 (1-0-2)
2001902	Seminar in Advanced Dermatologic Research	1 (1-0-2)
2001903	Advanced Antiaging Medicine	1 (1-0-2)

Major Elective Courses

		Cr(Le-Pr-SS)
1702703	Advanced Cosmetic Science for Hair and Nail	9 (8-3-17)
1702704	Advanced Cosmetic Science for Aromatherapy and Spa	9 (8-3-17)
1702705	Advanced Cosmetic Science for Color and Make-up	9 (8-3-17)
2001904	Advanced Contact Dermatitis and Occupational Skin Diseases	2 (1-3-3)
2001905	Advanced Cosmetic Dermatology	2 (1-3-3)
2001906	Electron Microscope in Dermatology	2 (1-3-3)
2001907	Advanced Pediatric Dermatology	1 (1-0-2)
2001908	Advanced Technology in Dermatologic Research	2 (0-6-2)

Dissertation

		Cr(Le-Pr-SS)
2001909	Dissertation	36 (0-108-36)

* Cr : Credits
 Le : Lecture
 Pr : Practice
 SS : Self Study

Descriptions:

School of Anti-Aging and Regenerative Medicine

1702703 Advanced Cosmetic Science for Hair and Nail

9(8-3-17)

Hair and nail structure and functions; cosmetic products used for hair and nail care; current trends; types of raw materials and natural products; formulation and development techniques; product preservatives; quality control theory and concept of cosmetic product evaluation; analytical approaches; safety and stability; marketing and business planning for hair and nail cosmetic products.

1702704 Advanced Cosmetic Science for Aromatherapy and Spa

9(8-3-17)

History and development of perfumes and fragrances; natural and synthetic aroma materials; use in therapeutic manners; healing mechanisms; types of spa; research and development of aromatherapy and spa products; overview of statistical concepts and methodology; analysis and evaluation; applications of results to industry, marketing and business.

1702705 Advanced Cosmetic Science for Color and Make-up

9(8-3-17)

Health and beauty; facial and make-up techniques; eyebrow and eyelash treatments; types of color and make-up products; materials used in make-up cosmetics; background of quantitative and qualitative analysis; use of advanced instruments relevant to cosmetic products analysis and evaluation; study of the principle and effectiveness of business negotiation; analysis in case studies of organized negotiation.

2001700 Cosmetics Surgery

1(1-0-2)

Skin structure; interaction of tissue reaction; wrinkle treatment and wound management; blepharoplasty, tissue regeneration and laser treatment.

2001701 General Clinical Dermatology 1

1(1-0-2)

Sign and symptoms; pathology; causes; diagnosis and treatment of common skin diseases.

2001702 General Clinical Dermatology 2

1(1-0-2)

Action of the drug and treatment in common skin disease; signs and symptoms; pathology; causes; diagnosis and treatment of uncommon skin disease.

2001703 Dermatologic Clinic 1

1(0-6-1)

Anamnesis, physical examination of the skin and related systems, laboratory investigation for the diagnosis, medical treatment, laser surgery for treatment of common skin disease, etc.

2001704 Dermatologic Clinic 2

1(0-6-1)

Anamnesis, physical examination of skin and other related systems; laboratory investigation for diagnosis; treatment of infectious skin disease for instance: bacterial, leprosy, viral, HIV, mycobacterial, parasitic and sexual transmitted disease.

2001705 Dermatologic Case Seminar

1(1-0-2)

Diagnosis of the patient by working laboratory investigation, pathophysiology, journal club seminar and discussion of interesting cases, etc.

2001706 Dermatologic Research Journal Seminar

1(1-0-2)

Analyze and discuss dermatologic publication; designing the student's thesis.

2001707 Antiaging Medicine

1(1-0-2)

Theory of aging, healthy life style, exercise, sign and symptom of degenerative process of human including pathology, cause and diagnosis of aging condition and related disorder.

2001708 Contact Dermatitis and Occupation Skin Diseases Clinic

1(0-3-1)

Anamnesis, physical examination, prevention and treatment of contact dermatitis, occupational skin disease including patch test and prick test and occupational skin disease in the factory.

2001709 Microscopic Dermatology

1(0-6-1)

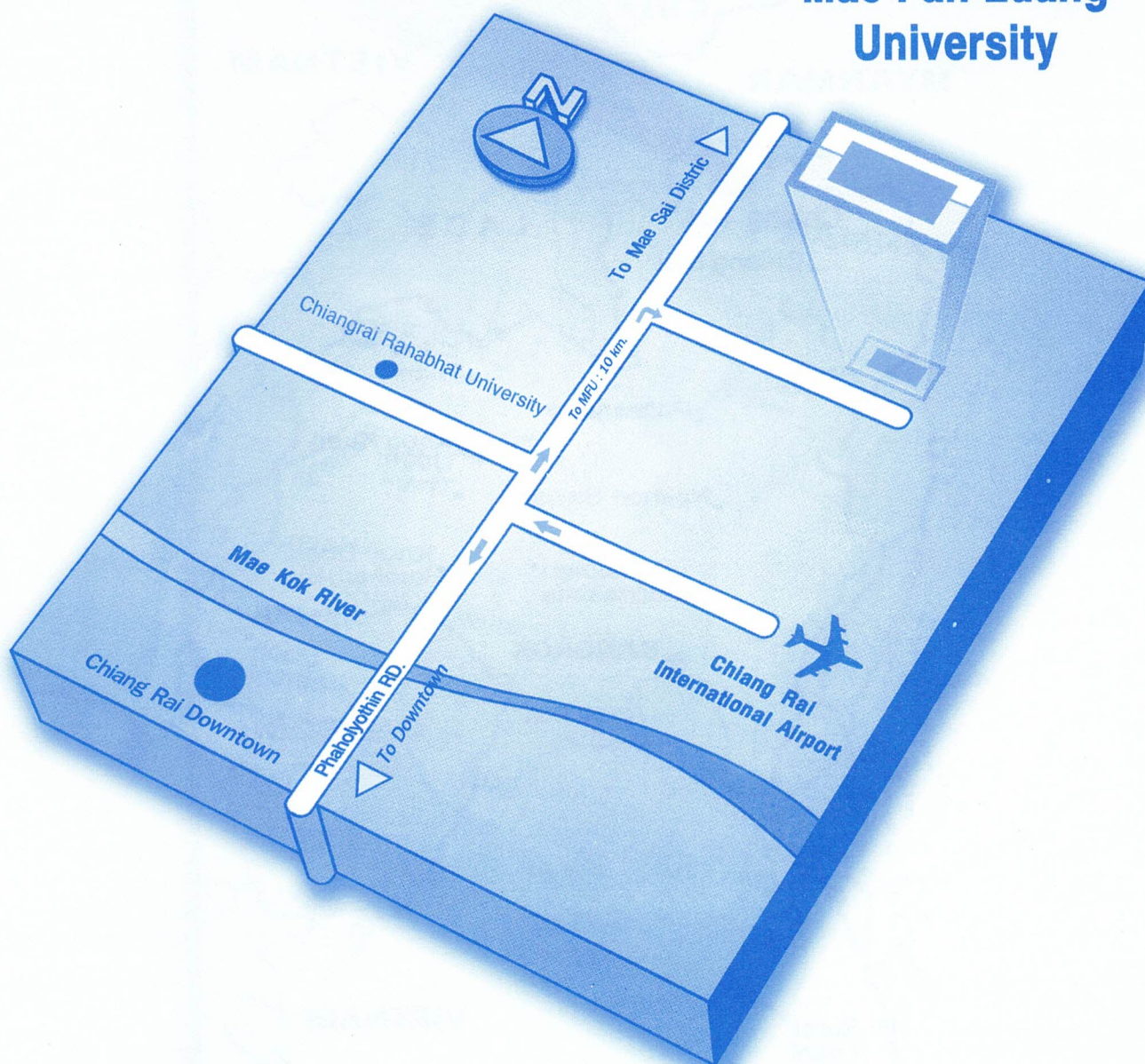
Histology of skin; sebaceous gland; sweat gland; endothelial cell; nerve; lymphatic system in normal and pathological skin condition; by using microscope and electron microscope.

- 2001801 Dermatologic Clinic 3 1(0-6-1)**
Anamnesis; physical examination of skin and other skin diseases; laboratory investigation for diagnosis; treatment of skin disease including consultation for junior dermatologist, medical students and general physician.
- 2001802 Dermatologic Clinic 4 1(0-6-1)**
Anamnesis ; physical examination of skin and other related skin disorder; laboratory investigation for diagnosis; treatment of skin disease; including consultation for junior dermatologist, patients and people; publication of academic paper for organization and related institute, this course also provides the medical and academic knowledge to the public including the concerning organization.
- 2001901 Applied Epidemiology 1(1-0-2)**
Applied Epidemiology to identify the risk of diseases. Subjected related including dermatologic disease, degenerative disease ,nutrition ,genetic, radiology ,biochemistry, environment ,pollution, philosophy of science. Both research ethics and concerning laws are included in Bioethics.
- 2001902 Seminar in Advanced Dermatologic Research 1(1-0-2)**
Analyze and criticize the research methodology , results, conclusion of local and international dermatologic research and also can design and develop their individual research methodology.
- 2001903 Advanced Antiaging Medicine 1(1-0-2)**
Overview of degenerative medicine include sign and symptoms, pathogenesis, pathology, diagnosis , prevention and treatment.
- 2001904 Advanced Contact Dermatitis and Occupational Skin Diseases 2(1-3-3)**
Overview of contact and occupational dermatology , studying patch test, photopatch test ,prick test, factory observation, usage of research instrument in contact dermatitis and occupational skin diseases.
- 2001905 Advanced Cosmetic Dermatology 2(1-3-3)**
Overview of cellular senescence, skin aging and rejuvenation , usage of research instruments, lasers ,radiofrequency for treatment and research.
- 2001906 Electron Microscope in Dermatology 2(1-3-3)**
Overview of electron microscope of skin, sebaceous glands, sweat glands, hair follicles, hair shafts, nails, blood vessels, nerves and lymphatic system in normal physiologic and pathological process. Relationship between skin manifestations and skin pathology which can be diagnosed by Transmission Electron Microscope and Scanning Electron Microscope.
- 2001907 Advanced Pediatric Dermatology 1(1-0-2)**
Overview of common and characteristic findings in pediatric dermatology, studying subspecialty in Electron Microscope , Immunology, Pharmacology, Genodermatoses such as Epidermolysis bullosa, Ichthyosis, atopic dermatitis, Histiocytosis and Non-Histiocytosis.
- 2001908 Advanced Technology in Dermatologic Research 2(0-6-2)**
Overview of theory which includes method of using high-technology instruments in dermatology, attending elective studies in other dermatologic departments such as Juntendo University, Tokyo, Japan.
- 2001909 Dissertation 36(0-108-36)**
Research methodology in related subjects such as clinical research, basic science research, presentation of project proposal , presentation of the research progression, conclusion of the result, writing the manuscript and have a final examination of the dissertation under the supervision of the research committee.
- 2001910 Dissertation 48(0-144-48)**
Research methodology in related subjects such as clinical research, basic science research, presentation of project proposal , presentation of the research progression, conclusion of the result, writing the manuscript and have a final examination of the dissertation under the supervision of the research committee.

MFU MAP



**Mae Fah Luang
University**



Information :

Distance from Downtown to MFU : 17 Km.

Distance from BKK to Chiang Rai : 860 Km.

Temperature : Summer 26-35 °C

Winter 13-26 °C

Transportation : Air/Bus

MAE FAH LUANG UNIVERSITY

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