

## Course Detail

### Master of Science in Bioscience for Sustainable Agriculture (International Program)

<b>Course Title:</b>	Master of Science in Bioscience for Sustainable Agriculture (International Program)
<b>Master Degree:</b>	M.Sc. (Bioscience for Sustainable Agriculture)
<b>Academic Institution:</b>	Faculty of Animal Sciences and Agricultural Technology, Silpakorn University
<b>Duration:</b>	2 years 4 months (July 2020 – October 2022)

### Background and Rational:

#### 1. Background

Increasing population demands more food production and this requires more arable land for agriculture. Fertile forest has been encroached, due to the need for more lands for cultivation, and it brings about prolonged drought during summer season and flooding during rainy season. Biodiversity has been threatened, and greenhouse effect and global warming have become a clear and present danger to the wellbeing of the human being. The current agricultural malpractices, such as monoculture and overuse of chemical fertilizers and pesticides, have also caused negative impact to health and environment.

Thailand also faces with these problems. Encroachment of mangrove forest, for the production of commercial marine produces and for wood to produce charcoal for energy, has destroyed the nursery of coastal marine animals. The encroachment into the forest in the North also causes the degradation of water-shed area resulting to soil erosion which in turn brings about the accumulation of soil sediment in the rivers. Moreover, Thailand ranked 40 among the countries all over the world for the area used in agriculture but Thailand ranks fourth as the main importer of a chemical used for agriculture. This information indicates that agricultural production in Thailand has been contribution to a certain degree of the degradation of an environment.

There are several agricultural activities, such as pineapple production, dairy and goat production, and cultivation of commercial aquatic animals, in Phetchaburi province. These activities contribute to the above-mentioned environmental degradation. For example, pineapple production in the area, in which the farmers have used herbicides continuously, results to the accumulation of toxic herbicides and renders the land un-usable for producing other crops. All these problems make it necessary to adopt a new concept to practice agriculture should the negative effects be possibly mitigated if not eradicated.

#### 2. Rational

Program in Bioscience for Sustainable Agriculture at ASAT, Silpakorn University, Phetchaburi IT campus, offers the curriculum with the emphasis on teaching and researching in sustainability in agriculture to address these problems. The core concept of this curriculum bases

on the application of knowledge in biological science to solve the problem in agricultural production based on sufficiency economy philosophy (SEP). Research questions come from any sectors of the society, regardless of disciplines and scales of operation.

There are several Royal initiated projects which promote the concept of sustainability and SEP in Phetchaburi province, Thailand where ASAT, SU is located. This makes ASAT suitable and ready to teach the students to study in the program in Bioscience for Sustainable Agriculture under the sponsorship of Thailand International Cooperation Agency (TICA), Ministry of Foreign Affairs of the Kingdom of Thailand. For instance, the HuaySai Royal Development Study Center has provided the knowledge about the sufficient and sustainable agricultural production to the farmers. Some of these farmers have become to be an expert, promoting SEP and related agricultural techniques to the other farmers. Other Royal projects, such as the Sirindhorn International Environment Park (SIEP), “Chang-Hua-Mun” Royal Initiative Project and the King Royally Initiated Laem Phak Bia Environmental Research and Development Project, are also promoting the concept of sustainability and sufficiency economy philosophy (SEP) although each project has focused on different themes.

Staffs of ASAT, with expertise in both theoretical and applicable aspects of biological science, have been robustly conducting various research projects covering the areas of sustainable animal production, clean technology, animal care and hygiene, plant pest control, sustainable coastal resource management, appropriate technology for environmental control, soil conservation, integrated soil fertility management, plant genetic management, efficient waste management and waste utilization. Current research projects in these areas, funded to ASAT staffs, should offer the TICA-sponsored students an opportunity to learn and grow for their future.

### **Objectives:**

Master of Science in Bioscience for Sustainable Agriculture (International Program) aims to create personnel in agriculture with the capability to integrate bioscience knowledge with local wisdom, on the emphasis of the conservation of natural resources and environment to promote and develop the sustainability of agriculture.

### **Course Synopsis and Methodology:**

The Master of Science Program in Bioscience in Sustainable Agriculture (International Program) requires the candidate to take courses no less than 24 credits plus the research which is equivalent to 12 credits (Total 36 credits). The degree shall be awarded when the students fulfill one international publication.

#### **1. Study plan**

<b>Course code</b>	<b>Course name</b>	<b>Credits</b>
<b>The first year</b>		
<u>1<sup>st</sup> Semester</u>		
715 501	Cell Science and Molecular Biology	3(3-0-6)

715 502	Bioscience for Agricultural and Environmental Sustainability	3(3-0-6)
715 503	Research Methodology for Agricultural Sustainability	3(3-0-6)
715 504	Selected Skills for Research in Bioscience for Sustainable Agriculture	1(1-0-2)
715 505	Seminar in Bioscience for Sustainable Agriculture I	1(1-0-2)
	<b>Total</b>	<b>11 credits</b>

2<sup>nd</sup> Semester

715 506	Seminar in Bioscience for Sustainable Agriculture II	1(1-0-2)
715 507	Integrative Research in Bioscience for Sustainable Agriculture	3(2-3-4)
	Elective Course	6
	<b>Total</b>	<b>10 credits</b>

Thesis Proposal examination shall be conducted before the first semester of the second year.

**The second year**1<sup>st</sup> Semester

715 592	Thesis	6
	Elective Course	3
	<b>Total</b>	<b>9 credits</b>

Comprehensive examination

2<sup>nd</sup> Semester

715 592	Thesis	6 credit
	<b>Total</b>	<b>6 credits</b>

Thesis defense examination

**2. Courses****Required courses 15 credits**

715 501	Cell Science and Molecular Biology	3(3-0-6)
715 502	Bioscience for Agricultural and Environmental Sustainability	3(3-0-6)
715 503	Research Methodology for Agricultural Sustainability	3(3-0-6)
715 504	Selected Skills for Research in Bioscience for Sustainable Agriculture	1(1-0-2)
715 505	Seminar in Bioscience for Sustainable Agriculture I	1(1-0-2)
715 506	Seminar in Bioscience for Sustainable Agriculture II	1(1-0-2)
715 507	Integrative Research in Bioscience for Sustainable Agriculture	3(2-3-4)

**Elective courses not less than 9 credits**

## 1. Animal Production

715 521	Organic Livestock Production for Sustainability	3(3-0-6)
715 522	Animal Genetic Improvement and Conservation	3(3-0-6)

715 523	Animal Farming Management Technology	3(3-0-6)
715 524	Hygiene in Dairy Production	3(3-0-6)
715 525	Animal Pathobiology	3(3-0-6)
715 526	Diagnosis of Aquatic Animal Diseases	3(2-3-4)
<b>2. Plant Production</b>		
715 527	Genetic Improvement for Crop Production	3(3-0-6)
715 528	Plant Genetic Resource and Application	3(3-0-6)
715 529	Seed Technology	3(2-3-4)
715 530	Plant Pathology	3(2-3-4)
715 531	Postharvest Physiology and Technology	3(2-3-4)
715 532	Integrated Pest Management	3(2-3-4)
<b>3. Multidisciplinary</b>		
715 533	Principle of King Rama IX Wisdom for Agricultural Sustainability	3(3-0-6)
715 534	Natural Resources and Environmental Management	3(3-0-6)
715 535	Ecology and Management of Aquatic Resources	3(3-0-6)
715 536	Soil Fertility and Protection for Sustainable Agriculture	3(2-3-4)
715 537	Microbial Diversity and Agricultural Application	3(2-3-4)
715 538	Food Safety Standard and International Policy	3(3-0-6)
715 539	Agribusiness and Entrepreneurship	3(3-0-6)
715 540	Modern Technology for Smart Farming Agriculture	3(3-0-6)
715 541	Molecular Biology Techniques and Bioinformatics	3(3-0-6)
715 542	Research in Agricultural Areas	3(3-0-6)
715 543	Enzyme Technology	3(3-0-6)
715 544	Selected Topics in Bioscience for Sustainable Agriculture	3(3-0-6)
<b>Thesis (equivalent to) 12 credits</b>		
715 592	Thesis (equivalent to)	12 credits

**Graduation Conditions:**

- Complete the courses as specified by the program with an average score of not less than 3.00 from the 4 levels score system or equivalent.
- Pass the comprehensive examination and English test in accordance with the Silpakorn University's Regulations on Graduate Study.
- Present a thesis and pass the final oral examination by the committee that the University has appointed. The examination shall be open to the general public who may be interested on the examined topic.
- Thesis work or part of the thesis must be either published in a journal or an international conference proceeding at least 1 publication.

**Applicant Qualifications:**

The applicants must hold a bachelor's degree or equivalent in Agriculture, Science or a related field, or another degree by the consent of the Curriculum Administration Committee, Faculty of Animal Sciences and Agricultural Technology, Silpakorn University with GPA of 2.50 or higher in the 4 levels score system or equivalent. Age should be no more than 40 year-olds.

**Document Required:**

1. Certified copy of transcript of record (High school and Bachelor's degree transcript, English version)
2. Certified copy of degree certified (English version)
3. Copy of TOEFL, IELTS, TOEIC or equivalent test result
4. Two letters of recommendations from the faculty members of the home institutes
5. Letter of permission from the Dean/ Director/ Rector/ Vice Chancellor/ President of the home institutes in case the candidate has been working as the staff member in the organizations
6. Concept proposal of research field of interest (not more than 250 words)

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\*\*\*The application procedure will complete when TICA has received the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible countries/territories.

## Course Detail

### Master of Science in Pharmacy Program in Pharmaceutics (International Program)

<b>Course Title:</b>	Master of Science in Pharmacy Program in Pharmaceutics (International Program)
<b>Master Degree:</b>	Master of Science in Pharmacy (Pharmaceutics)
<b>Academic Institution:</b>	Faculty of Pharmacy, Departments of Pharmacy and Manufacturing Pharmacy
<b>Duration:</b>	B.E. 2563-2565

### Background and Rational:

The patients in developing and underdeveloped countries have difficulty to access the quality medicines because those new medicines are expensive. Because new medicines that are currently in use are mostly imported from abroad, those new medicines are still under patent protection. The medicines are also important essential factor for national security. The solution to such problems is to develop alternatives which include the development of new drugs, new treatments, or new generics for patent expired medicines. However, the development of new drugs needs intensive investment. The development of high quality health herbal products, new generics, and also new drug delivery system are challenging and can be alternatives in patients' treatment. There are a quality processes and format to follow in the development for those quality alternatives worldwide and within the region such as ASEAN COMMON TECHNICAL DOSSIER (ACTD) FOR THE REGISTRATION OF PHARMACEUTICALS FOR HUMAN USE. The pharmaceutics is an important and fundamental knowledge for the development for those quality alternatives.

Graduate Programs in Pharmaceutics, offered by joint collaboration between Department of Pharmacy and Department of Manufacturing Pharmacy, Faculty of Pharmacy, Mahidol University. The graduate program has a long history since it first started in 1975 to offer M.Sc. degree. Since the first Master program in 1975, our graduate study programs have grown considerably and have now become known as one of the best graduate programs among the Faculties of Pharmacy in Thailand. Currently, the Faculty offers an international graduate program in pharmaceutics. The program has been continuously improved to increase the quality of graduate students training and to keep up with forefront knowledge and technology in the field of Pharmaceutics. The Pharmaceutics is the science of research and development of pharmaceutical products, thus the results of the research or application of research in this program are aim to improve the drug formulation, absorption/bioavailability, stability with better delivery system. The research theme includes topics in pharmaceutics, biopharmaceutics, generics formula development, bioequivalence, novel drug delivery system, Absorption Distribution Metabolism Excretion Toxicity (ADMET) properties of new medicines etc. The development are not only for medicines but also extended for health products, functional foods, medicinal herbs, cosmetics, pharmaceutical devices.

All our academic staffs have held Ph.D. degree and have background knowledge covering all in Pharmaceutics fields domestically and internationally (including U.S.A., Europe and Asia). Most of academic staffs have strong experience in academic teaching, post-doctoral research, and research investigation. The research experience of our staffs has been guaranteed by a load of publications with continuation from the past to the present. All academic staffs are allowed to attend scientific international conference and international training course to gain new and updated knowledge, exchange research experience with world class academic/research staffs and strengthen research competencies. The graduate program is formulated to enhance graduates' skills, initiative thinking and academic leadership so that they can transfer knowledge and research experiences to the domestic and international society.

Our graduate programs employ both in- and off-departmental facilities and equipment. All necessary equipment which supports all research work is distributed between the department of pharmacy and department of manufacturing pharmacy. Moreover, there are central laboratory research facilities where all the students can utilize. The teaching and learning facilities used for graduate study are adequate to support all the courses and scientific researches and are managed to meet the requirement of learning activities and scientific research for the lecturers and students in the program. The wireless internet can be reached for all of the rooms. The students have access to study areas for self-study according their convenience upon request.

### Objectives:

The medicines and health products are one of the fundamentals of the living, the ultimate objective of the program is extended for the not just only the betterment for the whole international society through quality pharmaceutical product development. We will produce high calibre graduates for the international society who have the innovative thinking and will be responsible for quality pharmaceutical product development in their home countries.

### Course Synopsis & Methodology:

#### 1. Study plan:

##### Plan A2

Year	Semester 1			Semester 2		
1	GRID 603	Biostatistics	3(3-0-6)	PYPY 601	Advanced	3(3-0-6)
	PYID 685	Research Methodology In Pharmacy	2(2-0-6)		Biopharmaceutics	
	PYMP 641	Instrumental Research Techniques	1(0-3-1)	PYPT 601	Seminar in Pharmaceutics I	1(1-0-2)
	PYPY 660	Pharmaceutics Advanced	3(3-0-6)		Elective courses	8 credits
	PYMP 642	Pharmaceutics I Advanced Industrial Pharmacy I	3(2-3-5)			
		<b>Total</b>	<b>12 credits</b>		<b>Total</b>	<b>12 credits</b>



2	PYMP 602	Seminar in Pharmaceutics I	1(1-0-2)	PYPT 698	Thesis	6(0-18-0)
	PYPT 698	Thesis	6(0-18-0)			
	<b>Total</b>		<b>7 credits</b>			

**7.2 Course Content/Study Topic:**

1) Required courses	17	credits
2) Elective courses not less than	8	credits
3) Thesis	12	credits
<b>Total not less than</b>	<b>37</b>	<b>credits</b>

1) Required courses	17	credits
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**Credits (lecture–practice–self-study)**

GRID 603	Biostatistics	3(3-0-6)
PYID 685	Research Methodology in Pharmacy I	2(2-0-4)
PYMP 641	Instrumental Research Techniques in Pharmaceutics	1(0-3-1)
PYPT 601	Seminar in Pharmaceutics I	1(1-0-2)
PYPT 602	Seminar in Pharmaceutics II	1(1-0-2)
PYPY 601	Advanced Biopharmaceutics	3(3-0-6)
PYPY 660	Advanced Pharmaceutics I	3(3-0-6)
PYMP 642	Advanced Industrial Pharmacy I	3(2-3-5)

**Credits (lecture–practice–self-study)****2) Elective courses not less than 8 credits**

PYPY 619	Advanced Pharmacokinetics	3(3-0-6)
PYPY 661	Advanced Pharmaceutics II	3(3-0-6)
PYPY 662	Cosmeceutical Sciences	3(2-3-5)
PYPY 663	Pharmaceutical Product Development I	3(2-3-5)
PYPT 603	Special Problems in Pharmaceutics	2(0-6-2)
PYMP 640	Industrial Administration	2(2-0-4)
PYMP 643	Advanced Industrial Pharmacy II	3(2-3-5)
PYMP 644	Unit Operations in Pharmacy	2(2-0-4)
PYMP 645	Manufacturing Process Analytical Technology	2(2-0-4)
PYMP 646	Pharmaceutical Product Development II	3(2-3-5)
PYMP 647	Manufacture of Natural Products	2(2-0-4)

In addition to elective courses mentioned above, a student may register other courses in international program offered by other faculties' equivalent to graduate studies, Mahidol University or the ones offered by other universities according to the student's interest with the approval of the curriculum committee or the advisor.

**Thesis**

PYPH 698 Thesis	Credits (lecture – practice – self-study)	12(0-36-0)
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**Applicants Qualifications:**

1. hold a Bachelor's degree in Pharmacy and meet the requirements set by the Faculty of Graduate Studies
2. have a minimum grade point average of 2.50
3. Pass the English Proficiency Examination (MU-GRAD TEST score  $\geq 60$ ) offered by the Faculty of Graduate Studies, Mahidol University, or TOEFL iBT 54 up or TOEFL ITP 480 up or IELTS 5.0 up
4. Exemption from the above conditions may be granted by the Programme Committee under exceptional circumstances.

**Document Required:**

Documents required for the applications include the copy of the following documents

1. Degree Certificate (English Translated)
2. Academic Transcript (English Translated)
3. Photo
4. Passport
5. Curriculum Vitae (CV)
6. Health Certificate
7. Recommendation Letters (to request via online admission system)
8. Additional documents:  
e.g. Statement of Purpose, Letter of Work Experience, Professional License, Publications, Scholarship Letter, Research Proposal, Concept Paper, etc.
9. English Proficiency Score Report (directly sent by the test center)

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## Course Detail

### Master of Science/Master of Engineering in Environmental Technology and Management

<b>Course Title:</b>	Environmental Technology and Management
<b>Master Degree:</b>	Master of Science/Master of Engineering (Environmental Technology and Management)
<b>Academic Institution:</b>	The Joint Graduate School of Energy and Environment (JGSEE), King Mongkut's University of Technology Thonburi (KMUTT)
<b>Duration:</b>	2 Academic Years (August 2021 – July 2023)

#### Background and Rationale:

Graduates from the Master of Science/Master of Engineering program in Environmental Technology and Management will demonstrate professionalism through their technical and academic knowledge and capabilities in practical problem-based research, and their morals and ethics towards sustainability and self-sufficiency development pathway, and the society. They will be able to conduct collaborative research and/or technical works at the local, national, and regional (e.g. GMS, ASEAN, etc.) levels on energy related environmental issues, including air quality, acid deposition and regional haze pollution, and global warming and climate change. Their abilities and skills include energy and environmental data and information analysis, diagnosis, and synthesis in order to develop, adapt and select appropriate technologies, methods and approaches, enabling a country to go towards green economy and sustainable development. Their professionalism should significantly benefit countries in the Asia-Pacific region as well as others in the world that are on the way of rapid growth development under the context of globalization.

#### Objectives

- To produce graduate scientists and engineers who have acquired advanced theoretical and practical knowledge and skill in the fields of energy and environment, professionally capable to analyze and synthesize data into key findings to be disseminated to stakeholders in native language and in English.
- To produce graduate environmental scientists and engineers who possess capabilities to judge what impacts on the environment are related to energy production and use.
- To promote capacity building by hands-on research and energy related environmental issues and challenges solving for both public and private sectors.

**Course Synopsis and Methodology:****1. Study plan 40 Credits**

	<b>Plan A2-1</b>	<b>Plan A2-2</b>
Compulsory	7	7
Specific Compulsory	9	9
Elective	3	3
Thesis	21	12
Internship	-	9
<b>Total</b>	<b>40</b>	<b>40</b>

**2. Course content**

1. Compulsory Courses 7 credits
  - JEE 611 Seminar 1 credit
  - JEE 613 Research Methodology 3 credits
  - JEE 625 Energy and Environmental Economics, Management and Policy 3 credits
  
2. Specific Compulsory Courses 9 credits
  - JEE 667 Environmental Pollution Control Technology 3 credits
  - JEE 683 Energy and Environment 3 credits
  - JEE xxx Specific Compulsory (As recommended by advisor)\* 3 credits
  - \*Select 3 credits from research focus as recommended by advisor
  - Advanced Fuel Processing Laboratory (AFPL)
  - JEE 658 Renewable Energy Technologies 3 credits
  - JEE 659 Energy from Biomass 3 credits
  - Building Energy Science and Technology Laboratory (BEST)
  - JEE 647 Design of Suitable Urban Ecology 3 credits
  
  - Tropical Climate Science Modeling Laboratory (TCSM)
  - JEE 661 Tropical Climates and Boundary Layer Science 3 credits
  - JEE 664 Atmospheric and Air Quality Modeling 3 credits
  - Advanced Greenhouse Gases and Aerosols Research Laboratory (AGAR)
  - JEE 673 Waste and Climate Change 3 credits
  - JEE 674 Waste to Energy and Its Sustainable Mitigation 3 credits
  - JEE 685 Climate Change: Physical Science Basis 3 credits
  - JEE 696 Greenhouse Gas Measurement, Mitigation and Monitoring Technology 3 credits
  - Life Cycle Sustainability Assessment Laboratory (LCSAL)
  - JEE 671 Life Cycle Assessment 3 credits
  - JEE 681 Environmental Chemistry and Toxicology 3 credits
  - JEE 682 Environmental and Health Risk Assessment 3 credits
  - JEE 684 GIS and Remote Sensing 3 credits

- Other		
JEE 604 Special Study II		3 credits
JEE 605 Special Study III		3 credits
3. Elective Courses	3 credits	
Select a 3 credit-course as recommended by advisor from the following list		
JEE 604 Special Study II		3 credits
JEE 605 Special Study III		3 credits
JEE 606 Mathematical Techniques		3 credits
JEE 645 Clean Technologies for Solid Fuels		3 credits
JEE 647 Design of Suitable Urban Ecology		3 credits
JEE 649 Energy Entrepreneurship		3 credits
JEE 653 Solar Energy		3 credits
JEE 656 Energy Efficiency		3 credits
JEE 658 Renewable Energy Technologies		3 credits
JEE 659 Energy from Biomass		3 credits
JEE 661 Tropical Climates and Boundary Layer Science		3 credits
JEE 664 Atmospheric and Air Quality Modeling		3 credits
JEE 671 Life Cycle Assessment		3 credits
JEE 673 Waste and Climate Change		3 credits
JEE 674 Waste to Energy and Its Sustainable Mitigation		3 credits
JEE 681 Environmental Chemistry and Toxicology		3 credits
JEE 682 Environmental and Health Risk Assessment		3 credits
JEE 684 GIS and Remote Sensing		3 credits
JEE 685 Climate Change: Physical Science Basis		3 credits
JEE 691 Climate Change Policy		3 credits
JEE 696 Greenhouse Gas Measurement, Mitigation and Monitoring Technology		3 credits
JEE 703 Selected Topics I		3 credits
JEE 713 Selected Topics II		3 credits
4. Thesis		
Plan A 2-1		
JEE 640 Thesis		21 credits
Plan A 2-2		
JEE 620 Thesis		12 credits
5. Internship		
Plan A 2-2		
JEE 616 Internship		9 credits
6. English Courses (Without Credit)		
LNG 601 Foundation English for International Programs		S/U*
LNG 602 Thesis Writing		S/U
* Only for students with condition to improve English skill since admission		

**Graduation Conditions:**

- **Earning credits:** The students are required to pass all the subjects (40 Credits) with minimum grade of each subject must be above C and the total average grade (GPA) must be above 3.00
- **Publications and research results:** 1 National Journal Paper

**Applicant Qualifications:**

M.Sc program must hold a first degree in engineering, science, economics, technology, agriculture or related fields. M.Eng program must hold in engineering only, with a minimum GPA of 2.50, or be ranked top 25% of the class. Applicants with other qualifications may be admitted on a case by case basis subject to the approval of JGSEE's Executive Committee.

**Document Required:**

- A copy of passport (Bio page)
- 1 Inch size photo
- Full transcript with date of graduation
- 3 letters of recommendation
- Tentative proposal
- English proficiency test result (IELTS 6, TOEFL iBT 78, International program within 2 years)

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## Course Detail

### Master of Science Program in Smart Grid Technology

<b>Course Title:</b>	Master of Science Program in Smart Grid Technology
<b>Master Degree:</b>	M.S. Master of Science Program in Smart Grid Technology
<b>Academic Institution:</b>	Naresuan University, School of Renewable Energy and Smart Grid Technology
<b>Duration:</b>	Two (2) Years (Academic year 2021-2023). Master Course will start in June 2021 and end in May 2023

#### Background and Rational:

To be knowledgeable, skillful, competitive, innovative and dynamic infrastructure experience in smart grid technology worldwide to handle and deal with the great energy disruption

#### Objectives:

- Keen in knowledge, skills, and experiences in smart grid technology and able to integrate smart grid technology with other relevant technology focusing on the smart grid technology development for the benefits of the nation
- Competent in smart grid technology research in a systematic
- Equipped with an inquiry mind and professional ethics.

#### Course Synopsis and Methodology:

##### 1. Structure of the Program

##### 1.1 Credit Requirement\*

Requirements	Plan A Type A2
Coursework	24
- Core Courses	12
- Electives	12
Required Non-Credit courses	5
Thesis	12
Independent Study	-
<b>Total</b>	<b>36</b>

\* Minimum credits required.



**1.2 Core Course**

Requirements	Plan A Type A2	
	Course No.	Credits
Energy Source and Energy Management	853504	3
Smart Grid Infrastructure and Planning	853505	3
Smart Grid Technology	853506	3
Information and Communication Technology for Smart Grid	853507	3
<b>Total</b>	<b>4</b>	

**1.3 Electives**

Requirements	Plan A Type A2	
	Course No.	Credits
Digital and Computer Application	853511	-
Algorithm and Energy Management Software for Smart Grid	853512	-
Communication Infrastructure for Smart Grid	853513	-
Renewable Energy Power Generation	853521	-
Micro grid System	853522	-
Power Electronic Converters for Smart Grid	853523	-
Electric Vehicle Technology	853524	-
Power Electronics Converters for Renewable Energy Sources and Storages	853525	-
Energy Storage System for Smart Grid	853531	-
Hydrogen and Fuel Cell Technology for Smart Grid	853532	-
Business Management for Smart Grid	853541	-
Smart Grid Economic	853542	-
Smart Grid for Community Infrastructure	853543	-
Community Smart Micro Grid Technology	853544	-
Economic Policy Formulation of Smart Grid	853545	-
Selected Topics in Smart Grid Technology	853546	-
<b>Total</b>	<b>16</b>	<b>≥ 12</b>

**1.4 Required Non-Credit Courses.**

Requirements	Plan A Type A2	
	Course No.	Credits
Research Methodology in Science and Technology	853501	3
Seminar 1	853502	1
Seminar 2	853503	1
<b>Total</b>	<b>3</b>	<b>5</b>

**1.5 Thesis Credit Requirements.**

Requirements	Plan A Type A2	
	Course No.	Credits
Thesis 1, Type A2	853591	3
Thesis 2, Type A2	853592	3
Thesis 3, Type A2	853593	6
<b>Total</b>	<b>3</b>	<b>12</b>

**Study plan****The first year****First Semester**

Requirements	Plan A Type A2	
	Course No.	Credits
Research Methodology in Science and Technology	853501	Non-Credit
Energy Source and Energy Management	853504	3
Smart Grid Infrastructure and Planning	853505	3
Smart Grid Technology	853506	3
<b>Total</b>	<b>4</b>	<b>9</b>

**Second Semester**

Requirements	Plan A Type A2	
	Course No.	Credits
Information and Communication Technology for Smart Grid	853507	3
Elective Course	853xxx	3
Thesis 1, Type A 2	853591	3
Seminar 1	853502	Non-credit
<b>Total</b>	<b>4</b>	<b>9</b>

**The second year**  
**First Semester**

Requirements	Plan A Type A2	
	Course No.	Credits
Elective Course	853xxx	3
Elective Course	853xxx	3
Thesis 2, Type A 2	853592	3
Independent Study 1	-	-
Seminar 2	853503	Non-credit
<b>Total</b>	<b>4</b>	<b>9</b>

**Second Semester**

Requirements	Plan A Type A2	
	Course No.	Credits
Elective Course	853xxx	3
Thesis 3, Type A 2	853593	6
Independent Study 2	-	-
<b>Total</b>	<b>2</b>	<b>9</b>

**2. Course Content**

**853501 Research Methodology in Science and Technology 3(3-0-6)**

Characteristics and research goals, types and research processes, variables and hypothesis, collecting data, proposal and research writing, research evaluation and its application, ethics of researcher, proper techniques of research methodology in science and technology

**853502 Seminar 1 1(0-3-1)**

Emphasize on encouraging students to learn how to search, criticize the articles and published papers, and practice the oral presentation on selected topics of current research or thesis progress in smart grid technology

**853503 Seminar 2 1(0-3-1)**

Presentation and discussion of current research topics related to smart grid technology with precise topic and content

**853504 Energy Source and Energy Management 3(2-3-5)**

Energy infrastructure, energy sources, centralized generation during base load, intermediate load and peak load; load profile in city, community, industrial factory, office building and residence, electricity from renewable energy, energy demand and supply; demand response, decentralized generation from renewable energy, energy management system (HEMs, BEMs, FEMs, CEMs); low carbon interventions of micro-generation and electric vehicles (EVs), zero net energy, zero net emission, policy and regulatory framework for smart grids

- 853505 Smart Grid Infrastructure and Planning 3(2-3-5)**  
 Smart grid infrastructure logistics and transportation for oil, gas, coal from sources to power plants around the world, modern forms of transmission lines for electrical energy instead of fuel transportation, electricity generation from renewable energy sources that is available in local area, the limited problems of traditional electricity transmission lines from renewable energy, decentralized generation connected with transmission lines, connection of the transmission lines in international, domestic and community levels, smart grid policies in different countries, incentives mechanism for smart grid deployment
- 853506 Smart Grid Technology 3(2-3-5)**  
 Centralized and distribution generation, distributed generation connected with transmission lines, traditional transmission lines and smart grid system , information and communication technology (ICT), distribution management systems with smart metering, storage technology, EV, smart grid system for managing electricity use in smart building, electricity customer-side systems
- 853507 Information and Communication Technology for Smart Grid 3(2-3-5)**  
 Information and communication technology, power system information, Smart Grid communication infrastructures, network coding (NC), compressive sensing (CS), communication architecture, communication application for smart grid, active network wireless communication information, array record and control electronic component, energy flow monitoring, power demand and supply status
- 853511 Digital and Computer Application 3(2-3-5)**  
 Introduction to digital system, analysis of logic circuit and Boolean algebra, logic circuit design, number system and digital code, counter circuit and application, algorithms and logic circuits for processing, digital computer, microprocessors and microcomputer, application software for measurement, smart grid control system network, interface, data management and evaluation, monitoring and display
- 853512 Algorithm and Energy Management Software for Smart Grid 3(2-3-5)**  
 Algorithm of electricity management from renewable energy, logic and priority of energy production; type of load profile, software development processes concepts, software system analysis and design; database system, network transport protocol, Socket programming, Real-time networking, Devices and gateways for smart grid
- 853513 Communication Infrastructure for Smart Grid 3(2-3-5)**  
 Network architecture, data communication and network, power system information, smart grid communication applications for power monitoring system, wide-area communication network, wireless networks for smart grid applications, data security system in smart grid communications and networking

- 853521 Renewable Energy Power Generation 3(2-3-5)**  
Renewable energy power generation technology in Smart Grid, constraint and algorithm of the power production from solar energy, wind energy, hydro energy and biomass, grid interconnection from renewable energy, intelligent demand response (DR) for energy management system (EMS), weather forecasting for energy usage and storage in battery by using smart grid management system, photovoltaic power generation in smart grid system, renewable energy power generation planning for community
- 853522 Microgrid System 3(2-3-5)**  
Microgrid definition as in smart grid context, role and advantage of microgrid, architecture and components of microgrid, microgrid design and sizing, distribution generation and power quality control in microgrid, algorithm and demand response (DR) and energy management system (EMS) for smart microgrid
- 853523 Power Electronic Converters for Smart Grids 3(2-3-5)**  
Power electronic devices, fundamental of power converters, pulse width modulation switching technique, AC-DC converters, DC-AC converters, DC-DC converters, wind energy inverters, photovoltaic inverters, electric vehicle battery chargers, battery inverters, control systems of power converters
- 853524 Electric Vehicle Technology 3(2-3-5)**  
Electric vehicle evolution, criterion of internal combustion and electric vehicle, power train structures, traction motors, traction battery, power converters, battery chargers, charging infrastructure, vehicle to grid (V2G) and grid to vehicle (G2V) operations
- 853525 Power Electronics Converters for Renewable Energy Sources and Storages 3(2-3-5)**  
Grid integrated converters for renewable energy and storage devices, modeling and control of power converters, grid connection standards, grid synchronization techniques, islanding detection, maximum power point tracking methods
- 853531 Energy Storage System for Smart Grid 3(2-3-5)**  
World energy storage system and advantage, electro-physics and electro-chemical constraint of various battery, energy storage system algorithm for reducing the electrical fluctuation from renewable energy source, algorithm of battery storage for charging and quick discharging, immediately demand response, electrical reliability of energy storage system for smart grid, EV charging station planning, large-scale energy storage system in smart grid

- 853532 Hydrogen and Fuel Cell Technology for Smart Grid 3(2-3-5)**  
Concepts of hydrogen production and hydrogen energy carrier, utilization of hydrogen, hydrogen transportation and storage, safety and environmental impacts of hydrogen, principles of fuel cell, delivering fuel cell power, applications and control algorithm of hydrogen and fuel cell systems connected to smart grid
- 853541 Business Management for Smart Grid 3(2-3-5)**  
Electricity system markets and regulation, distribution system operators for smart grid, smart grid market, market efficiency, trading mechanisms, smart grid investment costs and operating savings, real time pricing, energy billing, supply and value chain in smart grid system, dynamic business model for prosumer, scenario schemes for smart grids
- 853542 Smart Grid Economic 3(2-3-5)**  
Energy forecasting, power generation and consumer power demand, smart grid cost and benefit categorization, operation of the uncertain renewable energy resources, chargeable and dischargeable storage, network loss and security constraints, scoping and measuring impacts, impact attributable to investments, monetizing smart grid benefits and costs, value of demand response, the cost to maximize smart grid benefits
- 853543 Smart Grid for Community Infrastructure 3(2-3-5)**  
Type of community, urban, suburb and rural community, Load profile analysis of communities, Smart grid for electricity management from renewable energy in community, Home and Building energy management, IT and Communication management for load balance and demand response (DR)
- 853544 Community Smart Micro Grid Technology 3(2-3-5)**  
Level of transmission line, national grid, micro grid, electrical operation model for grid connection and island mode, island smart micro grid from renewable energy source, substation of smart micro grid, smart micro grid for campus power, independent smart micro grid for smart community and smart farming
- 853545 Economic Policy Formulation of Smart Grid 3(2-3-5)**  
Smart grid market, energy industry and network operator and stakeholder, government roles in smart grid, policy formation and transition for smart grid issues, policies formulating analysis and trends in different countries, policy Impact assessment, regulatory incentives for smart grid deployment, energy budget and trade, risk analysis and management, future market and contract of electricity, optimization of smart grid technology deployment under domestic and international context

- 853546 Selected Topics in Smart Grid Technology 3(2-3-5)**  
New knowledge in smart grid technology based on current interest such as Artificial Intelligence, Big data analysis, Block chain technology and Internet of things
- 853581 Independent Study 1 2 Credits**  
Structural and formatting study of independent study including independent study proposal, literature review concerning interested topic of smart grid technology, set study problems or questions, identify independent study title for preparation of proposal
- 853582 Independent Study 2 2 Credits**  
Writing independent study proposal, presenting a proposal in a seminar which will be arranged by the school, conducting the independent study
- 853583 Independent Study 3 2 Credits**  
Writing a book of independent study following format of independent study guideline, presenting a defense independent study in a seminar
- 853591 Thesis 1, Type A 2 3 Credits**  
Study the elements of thesis or thesis examples in the related field of study, determine thesis title, develop concept paper and prepare the summary of literature and related research synthesis
- 853592 Thesis 2, Type A 2 3 Credits**  
Develop research instruments and research methodology and prepare thesis proposal in order to present it to the committee
- 853593 Thesis 3, Type A 2 6 Credits**  
Collect data, analyze data, prepare progress report in order to present it to the thesis advisor, and prepare full-text thesis and research article in order to get published according to the graduation criteria

**Graduation Conditions:**

1. Having completed the duration of study as specified by the course
2. Having registered all courses as required by the course
3. Having passed the English proficiency test as announced by the University
  - 3.1 Paper based TOEFL: 417
  - 3.2 Internet based TOEFL: 35
  - 3.3 International English Language Testing System (IELTS): 5.0
  - 3.4 CU-TEP: 54
  - 3.5 Cambridge Placement Test (CEPT): B1(37)
  - 3.6 Naresuan University Standard English Test (NU-SET): 85
  - 3.7 Naresuan University Writing Proficiency Test (NU-Writing): 60

4. Having completed all courses and passed all conditions as specified in the course
5. Having a grade point average of not less than 3.00
6. Having proposed the thesis defense and passed the final oral thesis defense
7. The thesis or a part of it must be published or accepted as full paper publication by a national or international journal, which is in the database of ISI Web Science or the SCOPUS journal list and must publish at least one study for master level.

**Applicant Qualifications:**

This program is open to applicants who have a bachelor degree in Engineering, Science, Applied Science and bachelor degree in any relevant field, or are in the final semester of their study

**Document Required:**

1. The Application Form affixed with colored photographs.
2. A letter of recommendation or a reference
3. A copy of Educational certificate
4. A copy of an Academic transcript
5. A copy of Personal Identity Card or Official Staff Card.
6. A copy of English languages certificates e.g. TOEFL, IELTS, or CU-TEP or NULC (if any)
7. Document to certify change of name or surname and/or marital status (if any).
8. Other supporting document

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\*\*\*The application procedure will complete when TICA has received the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible countries/territories.



## Course Detail

### Master of Science Program in Food Science and Technology (International Program)

**Course Title:** Master of Science Program in Food Science and Technology  
(International Program) New Curriculum 2015

**Master Degree:** Master of Science (Food Science and Technology)

**Academic Institution:** Faculty of Agro-Industry, Chiang Mai University

**Duration:** 2 Academic years

#### Background and Rational:

The International Program of Master's Degree in Food Science and Technology has been approved and provided by Faculty of Agro-Industry, Chiang Mai University, beginning year of the program in Academic Year 2015 as its first semester.

The Master of Science curriculum in Food Science and Technology (International Program) is the curriculum that emphasizing the internationalization by integrating advanced knowledge in the field of Food Science and Technology for food production with quality and safety in response to the demands of the world's market through research process and creation of knowledge. This will lead to the improvement and efficient development of food production and processing on national, South East Asia sub region, and international levels.

This science program on graduate study level, taught in English, will be recruiting both qualified Thai and International students. This program offers an opportunity to a select group of international students to learn and experience how to conduct a research and innovation in the field of Food Science and Technology by focusing on research with the characteristics of cooperation and multi-Interdisciplinary in order to implement acquired knowledge which is beneficial for the industrial development on both national and international levels.

There are many career options for students in the international program after their graduation i.e. Food Scientist, Food Safety Supervisor, Food Safety Inspector, Food Engineering Expert or Supervisor, Nutritionist, Lecturer, Academic Expert, Nutrition Consultant, Food Safety Consultant, Food Processing Consultant, Agro-Industrial business company owner, Factory entrepreneur, Food Product Supervisor, Quality Assurance Supervisor, Agro-Industrial Researcher and Product Development Manager.

#### Objectives:

1. To produce the graduates who have knowledge, ability and skills to carry out work relevant to food production and food quality control utilizing advanced level food technologies with the research ability in the field of Food Science and Technology. These can be achieved through critical thinking, analyses, and integration of the theoretical concepts on advanced level of Food

Science and Technology so that food industrial based problems or improvement can be resolved effectively.

2. To produce the graduates who have virtue, ethics, and maturity in performing the proper profession in both governmental and private sectors with the ability of analytical thinking and tackle problems based on systematic approach and morality.

3. To produce the graduates who have the ability in promoting the knowledge at both local and international levels. This will also include knowledge exchange with academics, policy makers, and members of the food industry organization in order to develop such organization in accordance with the international standard.

4. To produce the graduates who have good human relations are able to communicate with group members are able to implement of various types of information technology and are able to plan an efficient personal and organizational improvement.

### Course Synopsis and Methodology:

#### Study plan

#### Length of Program

The program is designed to be two academic years, and the period of study shall not exceed 4 academic years for both Plan A Type A1 and Plan A Type A2

#### 1. Plan A Type A 1

##### First Year

First semester		Credits	Second Semester		Credits
	Preparation of thesis proposal	-	601797	Thesis	12
	Proposing of thesis topic	-		Organizing seminar and presentation	-
<b>Total</b>		-		<b>Total</b>	<b>12</b>

##### Second year

First semester		Credits	Second Semester		Credits
601797	Thesis	12	601797	Thesis	12
	Organizing seminar and presentation	-		Organizing seminar and presentation	-
				Taking the comprehensive examination	
				Defending Thesis	
<b>Total</b>		12		<b>Total</b>	12

**Total 36 credits throughout the program**

**2. Plan A Type A 2****First year**

First semester		Credits	Second Semester		Credits
604715	Physical and Engineering Properties of Foods	3	601745	Advanced Food Processing and Technology	3
601731	Advanced Food Microbiology	3	601775	Advanced Food Science and Food Analysis	4
601758	Food Research Statistics	3		Elective subject	3
	Elective subject	3		Organizing seminar and presentation	-
	Organizing seminar and presentation	-		Preparation of thesis proposal	-
				Proposing of thesis topic	-
	Total	12		Total	10

**Second Year**

First semester		Credits	Second Semester		Credits
601791	Seminar 1	1	601792	Seminar 2	1
601799	Thesis	6	601799	Thesis	6
	Total	7		Total	7

**A total of credits throughout the program will not be lesser than 36 credits**

**Academic Year (2017)**

First Semester: August – December

Second Semester: January – May

Summer (Optional): Not available

Curriculum Operation: Semester System (bi – semesters)

One regular semester with no less than 15 weeks  
in each semester

Leaning time: in Office hours from Mon. – Fri.  
at 08.30 a.m. – 04.30 p.m.)

**Field of Research**

The International Program provides the advanced learning and research in the field of Food Science and Technology.

**Courses****Program of Study****1. Plan A Type A 1**

<b>Degree Requirements</b>	<b>36</b>	<b>credits</b>
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**A. Thesis 36 credits**

601797 FST 797 Master's Thesis	36	credits
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**B. Academic activities**

1) A student has to organize and present a seminar on the topic related to his/her thesis for at least 3 semesters and students have to attend seminar every semester throughout the studying period

2) The thesis or part of the thesis must

2.1) At least 1 master's thesis work or a part of master's thesis work must be published or at least accepted to publish in English in a national journal listed in TCI Tier 1 database and the student's name must be listed as the first author, **and** at least 1 master's thesis work or a part of master's thesis work must be presented in national conference accepted by the field of study and a full paper, written in English with the name of student listed as the first author, must be published in the peer reviewed Proceedings; **OR**

2.2) Be granted a patent **and** at least 1 master's thesis work or a part of master's thesis work must be presented in an international conference accepted by the field of study; and a full paper, written in English with the name of student listed as the first author, must be published in the peer reviewed Proceedings.

3) A student has to report thesis progression by following the format of results report stipulated by the Graduate School with approval by the Chairman of the Graduate Study Committee every semester

**C. Non-credit Courses**

1) Graduate School requirement : English language

2) Program requirement: in accordance with the consent of the adviser or the curriculum committee

**D. Comprehensive examination**

The student has to send a request form for comprehensive examination to Graduate School which is pre-approved by general or thesis advisers.

**2. Plan A Type A2**

<b>Degree Requirements</b>	<b>a minimum of</b>	<b>36 credits</b>
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<b>A. Coursework</b>	<b>a minimum of</b>	<b>24 credits</b>
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<b>1. Graduate Courses</b>	<b>a minimum of</b>	<b>24 credits</b>
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1.1 Subjects inside field of concentration	a minimum of	24 credits
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1.1.1 Required courses		18 credits
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601731	FST 731	Advanced Food Microbiology	3	credits
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601745	FST 745	Advanced Food Processing and Technology	3	credits
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601758	FST 758	Food Research Statistics	3	credits
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601775	FST 775	Advanced Food Science and Food Analysis	4	credits
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601791	FST 791	Seminar 1	1	credit
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601792	FST 792	Seminar 2	1 credit
604715	FE 715	Physical and Engineering Properties of Foods	3 credits
1.1.2 Elective courses		a minimum of	6 credits
The students select elective courses as following:			
601711	Cereal and Legume Chemistry		3 credits
601712	Carbohydrate in Foods		3 credits
601722	FST 722	Enzymes in Food Processing	3 credits
601723	FST 723	Minimally Processed Fruits and Vegetables	3 credits
601724	FST 724	Advanced Food Technology	3 credits
601729	FST 729	Fresh Product Management	3 credits
601742	FST 742	Food Encapsulation Technology	3 credits
601743	FST 743	Food Powder Technology	3 credits
601744	FST 744	Production Technology for Aerated Foods	3 credits
601746	FST 746	Advanced Marine Biotechnology	3 credits
601753	FST 753	Quality Control and Safety in Marine Products	3 credits
601754	FST 754	Utilization of Seafood Waste in Healthy Foods	3 credits
601755	FST 755	Mathematical Modeling for Bioprocess	3 credits
601765	FST 765	Food for Health	3 credits
601766	FST 766	Nutrition Labelling of Processed Food	3 credits
601767	FST 767	Advanced Human Nutrition	3 credits
601768	FST 768	Protein Functionality and Application	3 credits
601769	FST 769	Nutrient Metabolism	3 credits
601770	FST 770	Nutrition in Health and Disease	3 credits
601787	FST 787	Selected Topics in Food Science and Technology 1	1 credit
601788	FST 788	Selected Topics in Food Science and Technology 2	2 credits
601789	FST 789	Selected Topics in Food Science and Technology 3	3 credits
601811	FST 811	Dairy Chemistry and Microbiology	3 credits
601844	FST 844	Advanced Food Stability	3 credits
603724	PKT 724	Advanced Food Packaging Materials and Testing	3 credits
603743	PKT 743	Food Packaging Innovation	3 credits
603752	PKT 752	Food Packaging Design and Marketing	3 credits
604741	FE 741	Equipment Design in Food Industry	3 credits
604743	FE 743	Rheology of Foods and Biomaterials	3 credits
604751	FE 751	Postharvest System Engineering of Agricultural Products	3 credits
604761	FE 761	Drying Technology	3 credits
604762	FE 762	Frying Technology	3 credits
604764	FE 764	Membrane Technology	3 credits
604765	FE 765	Extrusion Technology	3 credits
604766	FE 766	Non-thermal Food Processing	3 credits
604767	FE 767	Supply Chain Management in Food Industry	3 credits

604843	FE 843	Advanced Kinetic Analysis in Food Process Engineering	3 credits
604844	FE 844	Advanced Processing and Biochemistry of Functional Foods	3 credits
604845	FE 845	Food Preservation by Pulsed Electric Fields	3 credits
604846	FE 846	Transport Phenomena in Food Processing	3 credits
604847	FE 847	Water Activity in Food Process Engineering	3 credits
604848	FE 848	Fluidization in Food Processing	3 credits
604849	FE 849	Development of Mathematical Modeling and Simulation in Food Process Engineering with Visual Basic Applications Programming	3 credits

or select from subjects with course code level of 700 or above with the consent of the graduate program administrative committee

1.2 Subjects outside field of concentration (If any) with course code level of 700 or above with the consent of the graduate program administrative committee

## **2. Advanced Undergraduate Subjects - none -**

**B. Thesis** **12 credits**  
601799 FST 799 Thesis 12 credits

## **C. Non-credit Courses**

- 1) Graduate school requirement: - a foreign language
- 2) Program requirement

Students who did not graduate from the field of Food Science and Technology in Bachelor Degree level are required to enroll in the subjects which will not be included as cumulative credits as following;

601701 FST 701	Food Microbiology and Chemistry	4 credits
601702 FST 702	Food Processing and Engineering	4 credits

The assessment result will be presented in S/U grading: "S" stands for "satisfactory" and "U" stands for "unsatisfactory" works.

## **D. Academic activities**

- 1) A student has to organize and present a seminar on the topic related to his/her thesis for at least 2 semesters and students have to attend seminar every semester throughout the studying period
- 2) The thesis or part of the thesis must
  - 2.1) be published or be processed to ensure that the research results or part of research results are accepted for at least one publication in the international journal or academic article with database at the Tier 1 level or be presented in the academic conference with at least one proceeding and the name of the student must appear as first author for at least one item. The published article must also be in full paper format in the journal with a peer reviewing committee or
  - 2.2) be granted a petty patent or a patent
- 3) A student has to report thesis progression by following the format of results report stipulated by the Graduate School with approval by the Chairman of the Graduate Study Committee every semester

**Graduation Conditions:**

**The Curriculum for Plan A Type A 1 program**

1. A student must pass the foreign language examination under the requirements set by the graduate school of Chiang Mai University.

2. A student must complete all requirements of the program division.

3. A student must pass the comprehensive examination.

4. A student must successfully pass the thesis defense examination.

5. The whole or part of a thesis must be

5.1 Be published or processed to ensure that the research results or part of research results are accepted for at least one publication in the scientific journal or academic article, and be presents in the academic conference with at least one proceeding and the student must appear as the first author for at least in one item. The published article must also be in full paper format in the journal with a peer reviewing committee or

5.2 Be granted a petty patent or a patent or be published in the journal or academic article for at least one item or be presented in the academic conference with at least one proceeding and the name of the student must appear as first author for at least one item. The published article must also be in full paper format in the journal with a peer reviewing committee.

6. A student must meet the qualifications as outlined in the Chiang Mai University Regulations on student honors, 2023

**The Curriculum for Plan A Type A 2 program**

1. A student must pass the foreign language examination under the requirements set by the graduate school of Chiang Mai University.

2. A student must complete the coursework and meet all requirements of the program division.

3. A student must earn the cumulative GPA of at least 3.00 and have the GPA of at least 3.00 for subjects in field of concentration.

4. A student must successfully pass the thesis defense examination.

5. The whole or part of a thesis must be

5.1 Be published or processed to ensure that the research results or part of research results are accepted for at least one publication in the journal or academic article or be presents in the academic conference with at least one proceeding and the name of the student must appear as the first author for at least in one item. The published article must also be in full paper format in the journal with a peer reviewing committee or

5.2 Be granted a petty patent or a patent.

6. A student must meet the qualifications as outlined in the Chiang Mai University Regulations on student honors, 2023.

**Applicant Qualifications:**

1. This will be in accordance with the Chiang Mai University Announcement of Candidates Eligible for Admission to an International Graduate Program for each academic year.

2. The students must complete a Bachelor's degree in the field of Food Science and Technology, Food Processing Technology, Packaging Technology, Marine Product

Technology, Product Development Technology, Biotechnology, Nutrition Sciences or other related fields, with a minimum grade point average (GPA) of 2.50 and graduated from either educational institutions accredited by the Office of Higher Education Commission or from other institutions with grade point equivalent to 2.50

3. Pass the fundamental English language qualification and show the proof of English test which must be valid within 2 years from the counting time of the application date.

The evidence must indicate the minimum standards in the English language below:

TOEFL Minimum 523 (paper-based) or

Minimum 523 (ITP) or

Minimum 193 (CBT) or

Minimum 69 (IBT) or

IELTS band 5.5 or

CMU-eTEGS 65

4. For the lack of evidence or the applicant has the proof of English language which is resulted less scores than the required standards above (no. 3), the approval of admission will be considered on the consent of the curriculum management committee.

In case that the applicant is accepted to the program, he/she must take an English proficiency test and provide further the proof of result which passes the requiring standards announced by the Graduate School, prior to submit the thesis topic and draft of proposal.

5. Other qualifications apart from those mentioned will be given according to the discretion of the Committee of Graduate Program in the Division of Food Science and Technology.

### **Document Required:**

Application materials:

1. A completed application form
2. Four 1-inch square photographs of ID/ passport type taken not more than six months.
3. An official proof of the applicant's undergraduate degree.
4. An official transcript written in English of the applicant's academic records.
5. A letter of recommendation written by the head of the applicant's affiliated institution or enterprise.
6. The applicant's concept proposal of about 800 – 1,000 words in one page of A4 paper-typed describing the research outline and/or previous research experience and research work presented at meetings and/or published (if any).
7. Official proof of English proficiency such as either the TOEFL or the IELTS with the following score criteria;

TOEFL Minimum 523 (paper-based) or

Minimum 523 (ITP) or

Minimum 193 (CBT) or

Minimum 69 (IBT) or

IELTS band 5.5 or

CMU-eTEGS 65



8. Copy of Awards/ Certification (If any).
9. Additional documents: A copy of valid passport

**Contact:**

1. Ass. Prof.Dr.Pilairuk Intipunya  
Faculty of Agro-Industry,  
Chiang Mai University  
Tel: 66-53-948246  
Fax: 66-53-948-218  
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Coordinating officer (International Program)  
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Faculty of Agro-Industry  
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**For more information:**

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## Course Detail

### Master of Science Program in Food Innovation, Safety, and Quality Management (International Program)

<b>Course Title:</b>	Master of Science Program in Food Innovation, Safety, and Quality Management (International Program)
<b>Master Degree:</b>	Master of Science (Food Innovation, Safety, and Quality Management)
<b>Academic Institution:</b>	Faculty of Technology, Khon Kaen University
<b>Duration:</b>	Two years (June 2021 – May 2023)

#### Background and Rational

The Thai government current strategy for economic and social development (the latest issue no 12 (2017 – 2021)) recognizes that one of its objectives is to elevate Thailand to be a developed country with security, prosperity and sustainability. Thailand must accelerate the improvement of fundamental strategic development factors in all respects. The Twelfth Plan focuses on incorporating creativity and innovation to generate a new value-added economy, including manufacturing processes and forms, new products and services, technology changes, and business patterns. Therefore, development in the next five years will focus on knowledge-based development which results from the use of wisdom, skills, science, technology, research and development, and innovation in all aspects of development. One of the target of the Twelfth Plan is that Thailand will be the world's kitchen of quality and hygienic food. The emphases and development issues of the Twelfth Plan focus on promotion of the application of technology and creativity and the development of innovation, based on environmentally-friendly production. The target industries for this group include advanced agro-based and food industry, e.g. functional food, creative food, and Halal food. The promotion of the application of automation in the production process, and a boost of research and development, creativity, and local wisdom utilization are key to increasing productivity and creating higher value-added products within the manufacturing sector. Moreover, one major development focus is on building up an environment conducive to knowledge-focused and innovation-driven production by establishing an efficient platform for cooperation linkages between the academic and industrial sectors in order to develop high quality human resources for industry, and support R&D for advanced industrial technology upgrading.

This International program, M.Sc. in Food Innovation, Safety, and Quality Management targets the objective of the Thai government's current strategic plan for economic and social development; this program will prepare students to acquire the capacity, knowledge and skills with an international perspective, so that they can make a contribution towards the improvement of food product using innovation technique, safety aspects of food production, and quality management systems in food industry, as well as serve private sector research laboratories which are important for the country's future innovation development.

#### Objectives

The program aims to provide students with advanced knowledge emphasizing on product development using innovation technique, safety aspects of food production, and quality management systems in food industry. The students will have an opportunity to develop their critical thinking and communication skills by conducting research, data analyses, and presenting the result. Areas of specialization include food product innovation, market and

consumer research, quality and safety management systems in food industry, quality monitoring, verification and improvement in food industry, risk analysis in food industry, international food safety policy and regulations etc.

### Course Synopsis and Methodology

#### Study plan

Program	Thesis	Coursework	Total
A1	36 Credits	-	36 Credits
A2	15 Credits	21 Credits	36 Credits

#### Course content/ Study Topic

Course	The Number of Credit Hours	
	Program A: A1	Program A: A2
<b>Total credit</b>	<b>36</b>	<b>36</b>
1) Required course	2 (non-credit)*	11
2) Elective course	-	10
3) Thesis	36	15

#### List of course

##### Program A: A1

##### 1) Compulsory course (non-credits)

Subject Code	Subject Name	Credit
TE137 891	Food Innovation, Safety and Quality Management Seminar I	1
TE137 892	Food Innovation, Safety and Quality Management Seminar II	1

\*Note: Student must visit food industry companies (at least 2 companies) arranged by the department.

##### (2) Thesis (36 Credits)

Subject Code	Subject Name	Credit
TE137 899	Thesis (for Program A1)	36

##### Program A: A2

##### 1) Compulsory course (11 credits)

Subject Code	Subject Name	Credit
TE137 510	Food Product Innovation, Market and Consumer Research	3
TE137 610	Quality and Safety Management Systems in Food Industry	3
TE137 710	Food Innovation, Safety and Quality Management Research Methodology	3
TE137 891	Food Innovation, Safety and Quality Management Seminar I	1
TE137 892	Food Innovation, Safety and Quality Management Seminar II	1
TE137 722	Overview of Food Science and Technology	3
TE137 752	Selected Topics in Food Science and Technology	3

\*Note: Student must visit food industry companies (at least 2 companies) arranged by the department.

##### 1) Elective course

Students must register for these elective subjects at least 10 credits with regards to the consent of advisor or curriculum's committees

Subject Code	Subject Name	Credit
TE137 112	Safety Monitoring and Analytical Techniques in Foods	2

TE137 113	Food Analytical Techniques in Safety and Quality Aspects	3
TE137 122	Food Toxicology	3
TE137 132	Functional Food Ingredients and Safety Aspects	3
TE137 142	Advanced Food Chemistry	3
TE137 212	Rapid Analytical Techniques in Food Microbiology	3
TE137 222	Advanced Food Microbiology	3
TE137 412	Process Development and Control	3
TE137 522	Sensory Evaluation in Food Research	3
TE137 622	Safety Aspects of Food Production	3
TE137 632	Risk Analysis in Food Industry	3
TE137 642	International Food Safety Policy and Regulations	2
TE137 652	Quality Monitoring, Verification and Improvement in Food Industry	3
TE137 732	Current Topics in Food Innovation, Food Safety and Quality Management	2
TE137 742	Logistic and Food Supply Chain Management	3
TE137 752	Selected Topics in Food Science and Technology	3
TE137 762	Innovation in Food Technology	3

## (2) Thesis (15 Credits)

Subject Code	Subject Name	Credit
TE137 899	Thesis (for Program A2)	15

### Graduation Conditions:

Receive academic credits as shown in (๑.)

The student is required to do one of the following:

- (1) At least one publication in an international journal which is shown in the ISI/SCOPUS database with an impact factor or SNIP/SJR indicator.
- (2) The research work is issued as a patent/petty patent.
- (3) The research work contributes or has significant impact on industry or community, which leads to a partnership between academia and other organizations.

Refer to (๔.๒), if the student chooses (1), the student is not required to submit the proceeding from international conference.

Attain a cumulative grade point average (GPAX) of 3.25 or higher every year

### Applicant Qualifications

Meet all the minimum requirement of Khon Kaen University Graduate School regarding the graduate student qualifications.

Applicant who applies for A1 must hold the GPA accumulative at least 3.25 of 4.00 from undergraduate level in the field of Science and Food Technology, Agro-industrial, Food Engineering, Food Product Development or other related field. Applicant who has GPA accumulative less than 3.25, must have working experience related to above mentioned fields at least 2 years. Or upon the decision of the program chair and committee.

Applicant who applies for A2 must hold the GPA accumulative at least 2.50 of 4.00 from undergraduate level in the field of Science or other related fields. Applicant who has GPA accumulative less than 2.50, must have working experience related to Science and Food Technology field at least 2 years. Or upon the decision of the program chair and committee.

**Document Required:**

1. TIPP Application form
2. Medical Report
3. English Proficiency Test (TOELF/IELTS)
4. Two (2) letters of recommendation
5. Official transcript(s) (original or Certified True Copies) of all academic records. All foreign documents must be accompanied with an English translation by an approved foreign credential evaluation service.
6. A copy of a degree certificate in English
7. A one-page statement of purpose explaining why you are applying and how you believe this degree will help you accomplish your goals.
8. Additional document needed for international students: A copy of a passport (profile page)

**Contacts:**

1. Dr. Patimakorn Pasuwan  
Position: Program Chair  
E-mail: patpas@kku.ac.th
2. Miss Patthama Thukkhane  
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## Course Detail

### Master of Science Program in Agricultural Science

<b>Course Title:</b>	Master of Science Program in Agricultural Science
<b>Master Degree:</b>	M.S. (Agricultural Science)
<b>Academic Institution:</b>	Faculty of Agriculture Natural Resources and Environment
<b>Duration:</b>	2 years (June 2021 – May 2023)

#### Background and Rational:

Agriculture Science play a major role through Sustainable Development Goal (SDGs). Agriculture is lauded upon Green and Bio-Economy as well as Circular Economy. While, Agriculture Science Technology an Innovation are rapidly demanded for life-long learning to raising human life quality with better competitiveness production base on conservation ecology and sustainable mankind environment.

#### Objectives:

1. To gain knowledge, competency, skill, and attitude for working in the field of agricultural science in the international level.
2. To be curious and have ability for doing research and developing agricultural science
3. To have various skills and readiness about technological transformation and development in higher level by having an awareness that will effect to environment and humanity.
4. To understand in social changing and condition both in Thailand and the world, to determine for developing the country following the role and responsibility throughout the conservation and promotion resources, religion, and national culture.
5. To have moral discipline, on time, honest, intelligence, professional realization and social responsibility.

#### Course Synopsis and Methodology:

Master of Science Program is the integrated course of study and research that focusing on Agricultural Sciences knowledge with Plant Science, Entomology, Diseases and Pests, Soil Resources Management, Agricultural Development, Animal Production in the tropical, Biotechnology, Post-Harvest, Seminar, and Thesis

**1. Study plan (Plan A Type A1) 36 credits**

<b>Year</b>	<b>Semester 1</b>	<b>credits</b>	<b>Semester 2</b>	<b>credits</b>
<b>Year 1</b>	107506 Seminar I (Non-credit)	1(0-2-3)	107507 Seminar II (Non-credit)	1(0-2-3)
	107591 Research Methodology in Science and Technology (Non-credit)	3(3-0-6)	107593 Thesis II Type A1	9
	107592 Thesis I Type A1	9		
<b>Year 2</b>	107508 Seminar III (Non-credit)	1(0-2-3)	107509 Seminar IV (Non-credit)	1(0-2-3)
	107594 Thesis III Type A1	9	107595 Thesis IV Type A1	9

**2. Course Description****107506 Seminar I**

To search, collect, and analyze on research publications and reviews in agricultural science and related topics to develop thesis topic and proposal. Oral presentation required.

**107507 Seminar II**

To search, analyze, criticize and summarize on research publications and reviews in agricultural science and related topics to develop thesis literature review. Oral presentation required.

**107508 Seminar III**

Presentation on thesis progress and brain storming to improve thesis research. Research publication preparation. Oral presentation required.

**107509 Seminar IV**

Open oral seminar on complete thesis research or thesis publications and brain storming from participants to improve thesis research.

**107591 Research Methodology in Science and Technology**

Research definition, characteristic and goal, types and research processes, research problem determination, variables and hypothesis, data collection, data analysis, proposal and research report writing, research evaluation, research application, ethics of researchers, and research techniques in science and technology.

**107592 Thesis I Type A1**

The basic overview of the thesis and its educational objectives. Structure and formatting of master degree's thesis. Suggesting thesis proposal elements. Identify a thesis theme.

**107593 Thesis II Type A1**

Performing a thorough review of the literature in the area of thesis theme and presentation. Developing in research methodology including a description of research design, the type of data to be collected, the method of collection, and how the data will be evaluated. Presenting a thesis proposal to thesis advisor and committee.

**107594 Thesis III Type A1**

Conducting thesis research to demonstrate mastery of a body of knowledge in agricultural science. Preparation and completion of a scientific manuscript for publication. Writing the master thesis document following the thesis guidelines.

**107595 Thesis IV Type A1**

Presenting the master thesis to the colloquium which either approved, rejected, or conditionally approved with commendations for improvement. Retifying the work and submitting it to the Graduate School.

**Course Content**

Naresuan University proudly offers Master of Science Program in Agricultural Science that focuses on Plant Science, Entomology, Soil Resources and Agricultural Environment Management, Agricultural Development, Tropical Animal Production, Energy Crops and Industrial Crops, and Postharvest Technology. The program takes two years in Plan A Type A1 requires 36 credits of thesis plus 6 credits of basic required courses.

**Course Synopsis & Methodology:**

Master of Science Program is the integrated course of study and research that focusing on Agricultural Sciences knowledge with Plant Science, Entomology, Diseases and Pests, Soil Resources Management, Agricultural Development, Animal Production in the tropical, Biotechnology, Post-Harvest, Seminar, and Thesis.

**Graduation Conditions:**

1. The complete 36- credit course
2. The complete thesis submission
3. The international research publication in Scopus or ISI
4. The English score certificate according to the university requirement

**Applicant Qualifications:**

Applicants must be holding a Bachelor degree or equivalent in Agriculture or related field with other qualifications of Naresuan University Graduate regulations

Plant Science, Entomology, Diseases and Pests, Soil Resources Management, Agricultural Development, Animal Production in the tropical, Biotechnology, Post-Harvest, Seminar, and Thesis

**Document Required**

1. Original undergraduate transcript
2. Grade point average of 2.75 or higher
3. Two letters of recommendation
4. TOEFL (for student non-English speaking institutions)
  - Computer based: 213
  - Paper based: 550
  - iBT: 80 and IELT: 6.5



5. Proposed Research Proposal (maximum 2 pages of A4 paper size) :

- Research Question
- Purposes of Research
- Research Framework
- Expected Results
- Methodology
- References

**Contact:**

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Faculty of Agriculture, Natural Resources and Environment  
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## Course Detail

### Master of Science Program in AgriScience and Technology (Postharvest) (International Program)

**Course Title:** AgriScience and Technology (Postharvest) (International Program)

**Master Degree:** M.Sc. in AgriScience and Technology (Postharvest)

**Academic Institution:** Division of Postharvest Technology  
School of Bioresources and Technology  
King Mongkut's University of Technology Thonburi (KMUTT)  
126 Pracha-Uthit Road, Bangmod, Thungkru, Bangkok 10140

**Duration:** 2 years (August 2021 – July 2023)

#### **Background and Rational:**

In less-developed countries, both quantitative and qualitative losses of agricultural products extremely variable magnitude occur at all stages of supply chain from production, harvesting, through handling, storage, processing and marketing (wholesale and retail) to final deliver to the consumer. Postharvest losses of agricultural products estimated about 25% of fruits, 40% vegetables and 15-20% grains are wasted during pre-harvest and post-harvest period. Hence the elimination of losses in agricultural products is important to augment food availability and food security for human in every nation.

In Thailand, there are plenty of raw agricultural commodities, which are produced for local market. The quality of such products is seldom adequate for export markets. At present, the export potential of the tropical to temperate zone is more quantity but the serious limitations are the failure to maintain the quality of produce and lack of appropriate handling techniques to reduce losses at harvest and after harvest. Therefore, King Mongkut's University of Technology Thonburi, feeling it had a key role to play, established the Postharvest Technology Program in 1993 to be response for graduate programs, research and development with the application of adequate technologies to solve the problem of losses and to control the quality of raw agricultural products after harvest.

In line with the government policy to improve the relationship between Thailand and ASEAN members as well as other partnership. KMUTT is willing to assist our partnership to develop human capabilities including training and technical exchanges. In doing this, the postharvest technology division is being conducted in English and accepted students from the Indochina, ASEAN and other regional countries. Students will be encouraged to do work in which research directions are motivated by problems in their countries to satisfy the country needs.

The division of postharvest technology offers graduate work leading to Master of Science in AgriScience and Technology (Postharvest) with majors in pre-harvest and postharvest

technology of perishable crops, postharvest technology of cereals and grain legumes. With a major, the main areas of specialization are physiology, entomology, pathology and engineering. The facilities available for graduate training include green house, laboratory of postharvest physiology, laboratory of postharvest enzymes and molecular biology, packinghouse unit and others. Graduate work in this division is designed to develop a high order of independent thought, broad knowledge and technical skills. The emphasis in graduate work is placed on research, supplemented by courses and seminars.

### Objectives:

To develop an effective graduate program in postharvest technology by promoting research activities to meet national and international needs as well as promoting linkages between institute. In addition, to produce qualified students with knowledge and ability to solve problems on pre and postharvest losses of agricultural products.

### Course Synopsis and Methodology:

#### 1. Study plan

<u>1<sup>st</sup> Year/ 1<sup>st</sup> Semester</u>		<b>Credit (Lecture-Practical-Shelf study)</b>
Code	Subject	(hour/week)
PHT 601	Research Techniques in Postharvest Technology	3 (2-3-7)
PHT 621	Postharvest Handling System of Perishable Crops	3 (2-3-7)
PHT xxx	Elective 1	<u>3</u> (x-x-x)
PHT xxx	Elective 2	<u>3</u> (x-x-x)
Total		12
Accumulative credit		12
<u>1<sup>st</sup> Year/ 2<sup>nd</sup> Semester</u>		<b>Credit (Lecture-Practical-Shelf study)</b>
Code	Subject	(hour/week)
PHT 612	Agricultural Production Systems	3 (2-3-7)
PHT 691	Seminar in Postharvest Technology I	1 (0-2-7)
PHT 699	Thesis	2 (-)
PHT xxx	Elective 3	<u>3</u> (x-x-x)
Total		9
Accumulative credit		21
<u>2<sup>nd</sup> Year/ 1<sup>st</sup> Semester</u>		<b>Credit (Lecture-Practical-Shelf study)</b>
Code	Subject	(hour/week)
PHT 698	Special Problem	3 (0-3-9)

PHT xxx	Elective 4	3 (x-x-x)
PHT 699	Thesis	3 (-)
Total		9
Accumulative credit		30
<b><u>2<sup>nd</sup> Year/ 2<sup>nd</sup> Semester</u></b>		<b>Credit (Lecture-Practical-Shelf study)</b>
Code	Subject	(hour/week)
PHT 692	Seminar in Postharvest Technology II	1 (0-2-7)
PHT 699	Thesis	7 (-)
Total		8
Accumulative credit		38

### **Estimated timeline for thesis plan**

Submission of thesis proposal : February 2022

Thesis proposal examination : May 2022

First thesis progressive examination : December 2022

Second thesis progressive examination : May 2023

Comprehensive examination : July 2023

Thesis defense examination : December 2023

## **2. Course Content**

The division of postharvest technology offers graduate work leading to Master of Science in AgriScience and Technology (Postharvest) with majors in pre-harvest and postharvest technology of perishable crops, postharvest technology of cereals and grain legumes. With a major, the main areas of specialization are physiology, entomology, pathology and engineering. The facilities available for graduate training include green house, laboratory of postharvest physiology, laboratory of postharvest enzymes and molecular biology, packinghouse unit and others. Graduate work in this division is designed to develop a high order of independent thought, broad knowledge and technical skills. The emphasis in graduate work is placed on research, supplemented by courses and seminars.

### ***CURRICULUM***

#### Course Requirement

##### 1. Compulsory Courses 14 credits

PHT 601 Research Techniques in Postharvest Technology 3 (2-3-7)

PHT 612 Agricultural Production Systems 3 (3-0-9)

PHT 621 Postharvest Handling System of Perishable Crops 3 (2-3-7)

PHT 691 Seminar in Postharvest Technology I 1 (0-2-7)

PHT 692 Seminar in Postharvest Technology II 1 (0-2-7)

PHT 698 Special Problem 3 (0-3-9)

##### 2. Electives in Postharvest Technology Courses 12 credits

PHT 602 Statistics for Agricultural Research 3 (2-3-9)

PHT 603 Agricultural Information Systems	3 (2-3-9)
PHT 611 Postharvest Losses of Agricultural Products	3 (3 0 9)
PHT 622 Postharvest Physiology and Technology of Agricultural Commodities	3 (3-0-9)
PHT 623 Postharvest Handling System of Ornamental Plants	3 (2-3-7)
PHT 624 Fresh-cut Technology for Fruits and Vegetables	3 (2-3-7)
PHT 631 Postharvest Handling System of Cereals and Grains	3 (3-0-9)
PHT 632 Postharvest Technology of Seeds	3 (2-3-7)
PHT 651 Smart Farming Systems and Emerging Technology	3 (3-0-9)
PHT 652 Management System Designs of Packing House for Agricultural	3 (3-0-9)
PHT 653 Produce Packaging System	3 (2-3-7)
PHT 661 Postharvest Insect Pest of Agricultural Products	3 (2-3-7)
PHT 662 Postharvest Pathology of Agricultural Products	3 (2-3-7)
PHT 671 Supply Chain Management and Logistics for Agricultural Commodities	3 (3-0-9)
PHT 672 Quality Management of Agricultural Produce	3 (3-0-9)
PHT 673 Business Management of Agricultural Commodities	3 (3-0-9)
PHT 697 Selected Topics in Postharvest Technology	3 (3-0-9)
<i>3. Master Thesis</i>	
PHT 699 Thesis	12 credits

### **Graduation Conditions:**

Students who want to graduate must fulfill the requirements as the follows;

- Students must complete study according to curriculum structures.
- Students must fulfill the program requirement with a GPA of at least 3.00.
- Students must pass a comprehensive examination.
- Pass a thesis defense examination with the result “PASSED”.
- Before being awarded a degree, students need to have their research work published in recognized national or international journals/proceeding, or their equivalent.

### **Applicant Qualifications:**

Applicants must hold a Bachelor's Degree in Engineering or Science (Agriculture, relevant Biological or Environmental Science, Food technology) average (GPA) of 2.75 or must has an experience in professional work at least 1 year.

### **Document Required:**

- Application form
- Completed transcript record
- Curriculum vitae
- Health examination certificate (**not over than 3 months**)
- Statement of academic background in bachelor’s degree including brief of research experience
- Statement of study plan in Thailand

**Contact:**

1. Contact person for the detail of study program

Assoc. Prof. Dr. Varit Srilaong  
Division of Postharvest Technology  
School of Bioresources and Technology  
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2. Program coordinator/ Student administrator

Assoc. Prof. Dr. Varit Srilaong  
Division of Postharvest Technology  
School of Bioresources and Technology  
King Mongkut's University of Technology Thonburi  
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## Course Detail

### Master of Public Health (Global Health) (International Program)

<b>Course Title:</b>	Master of Public Health in Global Health Programme (International Programme)
<b>Master Degree:</b>	Master of Public Health (Global Health) M.P.H. (Global Health)
<b>Academic Institution:</b>	Faculty of Public Health, Thammasat University
<b>Duration:</b>	Independent Study (capstone project) 1 Year Thesis Research 2 Years

### Background and Rational

The 20th century public health paradigm must be transformed into a 21st century global health model of partnership created on principles of equality, transparency, mutual interest, and respect in order to effectively address critical problems in population health. The Thammasat Faculty of Public Health is leading the way to develop international collaborations in education and research reflecting this new model. Our priorities include developing a graduate programme that defines global health from a socio-political perspective with an emphasis on interregional capacity building applying a South-to-South focus (Africa, Asia-Pacific and Middle East).

While enormous progress has taken place in aspects of biomedical science, the tools of public health and management, and social and political engagement, it is only when these elements come together that we have seen real and lasting strides in improving the health and wellbeing of the world's disadvantaged citizens. By using our collective multidisciplinary and multi-sector experiences, resources, and expertise we can help change the fundamentals of global health. Not alone in narrow disciplines, but through partnerships that draw on differing perspectives, differing knowledge and experience, and differing priorities. Understanding how to mobilize such partnerships, how to make them most effective, and where to turn for experience empowers us at the global stage. The programme aims to produce the intellectual foundation supporting a 21st century model of global health.

### Objectives:

The programme's objectives, expressed as core and functional competencies, that students are expected to achieve are as follows:

#### *Core competencies*

- Analyse the major underlying determinants of ill population health in countries and identify how human rights and social justice concepts and instruments provide a framework to promote global health.
- Analyse the political dimension of global health, including the processes by which health diplomacy influences the adoption and enforcement international laws, conventions, agreements, norms and standards through global actors and transnational networks. This should include the domains of trade, labour, food supply, the environment,

pharmaceuticals, international aid, human rights, and conflict.

- Analyse the principles and practices that foster collaborative and multi-stakeholder design, management, and evaluation of programmes in middle- and low-income countries to assure equitable access to quality health services.

### ***Functional competencies***

#### *Information for decision-making*

- Conduct effectively literature review and analyses
- Use effectively appropriate research methods including quantitative and qualitative approaches (epidemiologic, bio-statistical, and content analysis techniques for data analysis).
- Analyse global and regional burdens of the most important health problems contributing to excess morbidity and mortality in middle- and low-income countries, including their magnitude and distribution.
- Analyse disparities in health status by gender, race, ethnicity, rural/urban status, and economic class, and other relevant determinants in the context of existing epidemiological, bio-statistical, and qualitative data.
- Effectively apply communication concepts, skills and techniques for awareness raising and advocacy in decision-making

#### *Design, management and evaluation*

- Use effectively information for programme design in order to develop evidence-based, realistic and innovative programme responses to the underlying determinants of health inequities and disease.
- Understand and use management techniques that promote sustainability and cost-effectiveness of programmes.
- Assess the appropriateness of population-based intervention strategies to address major health problems in middle- and low-income settings, including locally determined priorities and their efficacy, cost-effectiveness, and feasibility in reaching all segments of the population.
- Identify and apply effective strategies for community development, systems advocacy; public awareness; policy advocacy; global diplomacy
- Apply collaborative and culturally relevant leadership skills to implement evidence-based policies and plans to solve public health problems in national and global settings.
- Evaluate and establish priorities to improve the health status of populations in middle- and low-income settings, with focus on applying integrated strategies.

#### *Capacity development for global health*

- Analyse and explain the economic, social, political, and academic conditions that impact capacity development.
- Apply systems thinking to enhance capacity development in countries.

### **Course Synopsis and Methodology:**

The international Master of Public Health (MPH) is the most widely recognized professional degree for leadership in public health. The MPH (Global Health) Programme at Thammasat University offers a rigorous curriculum with a concentration in global health that attracts dedicated and ambitious professionals with a passion to build a career in the global public



health arena. The programme's core coursework aims to develop candidates' key public health competencies and skills using cases and examples illustrating the global-local interface. The MPH programme at Thammasat University applies a highly interactive, student-centered and problem-based learning approach.

All MPH (Global Health) students are required to complete a set of public health core courses. In addition, students must enroll in a set of global health concentration courses. Students can then opt either for thesis research or an independent study plan (capstone project) complemented by elective coursework to reach a minimum total of 45 study credits.

### **STUDY PLAN**

The programme is designed to offer 2 study plans namely:

Plan-A: Thesis Research which encompasses up to 13 months (comprising of 1-month pre-programme seminars plus 3 consecutive terms) of full time on campus study followed by up to 12 months (3 consecutive terms) field based study to complete thesis research.

Plan-B: Independent Study which encompasses 15 months of full time on campus study (comprising of 1-month pre-programme seminars plus 3 consecutive terms plus 2 months for report writing and wrap-up).

#### **COURSE CONTENT/STUDY TOPIC:**

##### *Public Health Core Courses (3 credits each)*

GH600 Social Determinants of Health

GH601 Physical Environments and Health

GH602 Applied Epidemiology

GH603 Applied Biostatistics

GH604 Policy Development & Analysis

GH605 Foundations of Global Health-1 (exchange)

##### *Global Health Concentration Courses (2 credits each)*

GH610 Human Security: A Global Perspective

GH611 Human Rights and Global Health

GH612 Mobility and Global Health

GH613 Disease Control and Global Health

GH614 The Political Economy of Global Health

GH615 Research Methods in Global Health

GH616 Globalization and Health Systems

GH617 Foundations of Global Health-2 (exchange)

GH618 Global Health Practicum (exchange)

##### *Elective Courses Eco-Health (2 credits each)*

GH620 Eco-systems and Health

GH616 Globalization and Health Systems

GH622 One Health Management

GH623 Seminars in Eco and One Health

##### *Elective Courses Non-Communicable Diseases (2 credits each)*

GH630 Reframing Non-Communicable Diseases

GH631 Global Health and Ageing  
 GH632 Global Mental Health  
 GH633 Public Nutrition and Global Health  
 GH634 Violence and Global Health

*Elective Courses Crisis and Health (2 credits each)*

GH640 Public Health and Natural Hazards  
 GH641 Epidemic Management and Control  
 GH642 Public Health and Conflict

*Elective Courses Leadership and Management (2 credits each)*

GH650 Strategic Management and Leadership  
 GH652 Public Health Management  
 GH653 Program Evaluation

*General Electives Courses*

GH660 Measurement in Global Health	(2 credits)
GH662 Health in Detention	(2 credits)
GH663 Special Topics in Global Health	(1 credits)
GH664 Special Topics in Global Health	(2 credits)
GH665 Special Topics in Global Health	(3 credits)
GH666 Qualitative Approaches to Inquiry	(3 credits)
GH667 Health Literacy Assessment and Intervention	(2 credits)
GH668 Environmental Threats and Global Health	(2 credits)
GH700 Independent Study	(6 credits)
GH800 Thesis Research	(15 credits)

### **Applicant Qualifications**

- Hold at least a bachelor's degree or equivalent from domestic or overseas educational institutions accredited by the Thammasat University Council.
- Have a minimum cumulative grade point average of 2.75 or equivalent.
- **For all non-native speakers**, proven English language proficiency is a precondition for programme enrolment.
  - Minimum TOEFL score of PBT 550 or CBT 213 computer-based or iBT 79 or Minimum IELTS 6.0
- Preferably, have a proven minimum of two years professional experience.

### **Document Required**

- Completed application form
- Copy of degree certificates
- Copy of degree transcripts
- Copy of TOEFL or IELTS test score sheet
- Copy of valid passport
- Letter of reference
- Letter of motivation
- Medical certificate

**Contacts** Faculty of Public Health, Thammasat University  
Office: 02-564-4440-79  
Tel: 092-8962395  
Fax: 02-516-2708  
Email: [ojp-admissions@fph.tu.ac.th](mailto:ojp-admissions@fph.tu.ac.th)  
Website: <http://fph.tu.ac.th/en>

**Coordinators** Ms. Sirada Sahaimitr  
Ms. Samittra Pornwattanavate

**For more information:**

Bureau of International Cooperation on Human Resources Development  
Thailand International Cooperation Agency (TICA)  
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\*\*\*The application procedure will complete when TICA has received the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible countries/ territories.

## Course Detail

### Master of Public Health

<b>Course Title:</b>	Master of Public Health
<b>Master Degree:</b>	Master of Public Health (M.P.H.)
<b>Academic Institution:</b>	Faculty of Public Health, Naresuan University
<b>Duration:</b>	2 years (June 2021 – May 2023)

#### **Background and Rational:**

According to vision and mission of Naresuan University, they focus on three management approaches including 1) Hybrid. The university is to promote new knowledge and diverse skills to be applied and accepted nationally and internationally; 2) Partnerships. Strengthening partnership is one of the keys to help the university produce well-qualified students, research, and academic services, which leads to economic and social development and 3) Networking. The university continuously initiates networks with Thai and foreign institutions in order to promote the production of well-qualified students, commercialized research, and academic services to maximize the university capability as well as data and resource management. The course of M.P.H. (Master of Public Health) was established in order to serve those vision and mission. The course aims to produce well-qualified graduate students for being good leaders, analysts, as well as public health professionals who are able to collaborate knowledge and experiences in order to solve public health issues and improve quality of life of all people.

The faculty of public health has facilities to serve the course. Furthermore, all lecturers at the faculty have variety of experiences in the fields of public health. Most of them have research publications on international journals. Some of them conducted research project with international networks. Therefore, these experiences of the lecturers will convey to those graduate students fruitfully.

With respect to networks, the faculty has both national networks and international network. In terms of national network, provincial health office, community hospital, and health care center/Health Promoting Hospital are national networks where are the places for study visit in both urban and rural areas. Regarding international networks, there are GMS (Greater Mekong Subregion) and AUN HPN (ASEAN University Network- Health Promotion Network). These international networks are able to open the opportunity for our graduate students to present their research publications and share experiences with oversea students from many countries.

#### **Objectives of the program:**

The Master of Public Health course aims at shaping the students to be capable as follows:

1. Be morality and ethics, being able to solve problems and ethically make a decision under both professional and law concepts.
2. Be practitioner who can identify and stop health problems by applying knowledge of public health and other related fields to evaluate health necessity, problem conditions, and other factors causing problems.

3. Be able to analyze and conduct a research correctly, as well as develop health systems according with social context.

4. Be able to efficiently provide empirical evidence to evaluate, analyze, and manage the project in order to eliminate public health problems including health problems, health services, occupational health, and environmental health.

5. Be able to professionally communicate and use information technologies according with socio-cultural context.

6. Have both leadership and good human relations to work as a team with interdisciplinary, party networks, and other related fields for the purpose of eliminating public health problems in all levels; social, local, national, and international level.

7. Be able to work as a team. Be a good leader and a good follower.

8. Have good human relations. In addition, be able to cooperate with other sections properly.

### Course Synopsis Methodology:

#### 1. Study Plan

##### Study Plan of Master of Public Health Program (MPH)

##### First Year Program

##### 1<sup>st</sup> Semester

551514	Biostatistics for Public Health Research	3(2-2-5)
551517	Behavioral Sciences and Health Education	3(2-2-5)
551518	Epidemiology	3(2-2-5)
551591	Research Methodology in Public Health	3(2-2-5)
551592	Seminar (Non-Credit)	1(0-2-1)
Total		13 Credits

##### First Year Program

##### 2<sup>nd</sup> Semester

551515	Public Health Administration	3(2-2-5)
551516	Environmental and Occupational Health	3(2-2-5)
551521	Health Promotion	3(2-2-5)
551522	Population and Reproductive Health	3(2-2-5)
551581	Thesis 1, Type A2	3 Credits
Total		15 Credits

##### Second Year Program

##### 1<sup>st</sup> Semester

551XXX	Elective Course	3(2-2-5)
551582	Thesis 2, Type A2	3 Credits
Total		6 Credits

##### Second Year Program

##### 2<sup>nd</sup> Semester

551583	Thesis 3, Type A2	6 Credits
Total		6 Credits

**Total of Credits:** 40 Credits

**The Structure of the Curriculum:**

1) Coursework	
- Core Courses	18 Credits
- Compulsory Courses	6 Credits
- Electives	3 Credits
2) Thesis	12 Credits
3) Required Non-Credit Courses	1 Credits
	Total 40 Credits

**Curriculum Type:**

Master's Degree Level 4 according to Thai Qualifications Framework for Higher Education (TQF) B.E.2552

**Teaching Days-Times:**

Monday – Friday	8.00 – 17.00 hrs.
First Semester:	June – October
Second Semester:	November – March

**Time Frame of Thesis**

Submission of Research Topic:	July 2021
Defense of research proposal:	June 2022
Data collection:	August 2022
Defense of Thesis:	December 2022
Submission of graduation:	May 2023

**2. Course Content**

- 551514      Biostatistics for Public Health Research      3(2-2-5)**  
 Probability distribution and sampling distribution, Parameter estimation and hypothesis testing using parametric and non-parametric statistics, the relationship between the variables and regression analysis, using statistical software for data analysis, presenting data analysis, criticizing statistics used in research
- 551515      Public Health Administration      3(2-2-5)**  
 Concepts of administration and public health, ethics in health professionals, principles and processes of general administration for application in developing public health, roles, skills and leaderships of administrator, strategy and planning, organizing, directing, human resources management, development of information system, health economics, finance and budgeting, communication, networks and partnerships building, supervision, monitoring and controlling, evaluating and reporting, health care governance new administrative techniques applying for analysis a problem in public health administration, application the solution process and technology of management to improve public health at all levels
- 551516      Environmental and Occupational Health      3(2-2-5)**

Principles and concepts of ecology and environmental health, principles and concepts of food sanitation and food safety, insects and animals carrier control, solid waste management system, housing sanitation and environmental pollution, environmental policy, concepts and principles in risk assessment in environmental health, environmental impact assessment, concepts and importance of occupational health and safety, hazardous working environments, principles of control and prevention of hazards due to working environment, new problem issues in environmental health and occupational health, preparatory and supporting disaster

**551517 Behavioral Sciences and Health Education 3(2-2-5)**

Situation and trend in public health problems, causal analysis of problems in public health and health behaviors, concepts of health education, behavioral sciences and health behaviors, aims of health education, role of health education in public health solving, concept, model, and theories of health education and behavioral sciences, and the application for changing health behaviors, planning, implementing, and evaluating health education program, research and development of innovations in health education

**551518 Epidemiology 3(2-2-5)**

Concepts, Significance and scope of epidemiology, disease indicators, natural history of diseases and disease proven in human, concepts and progress in disease prevention for individual and community, measurement of frequency and association of disease, emerging and reemerging disease, Epidemiological surveillance and investigation, study design in epidemiology, and the application of principle and epidemiology in public health

**551521 Health Promotion 3(2-2-5)**

Concepts and Principles of health promotion, health promotion strategy, planning and evaluation of health promotion, health promoting individual, group health and health promotion in the community, health promotion in the workplace, promoting health in schools, promoting healthy by age groups, holistic health promotion, healthy lifestyle physical activity, healthy food, stress management, reducing risk factors, including, accidents, alcohol and cigarettes, Health promotion innovative, competency of public health professionals in health promotion, health promotion practice through interprofessional collaboration, evaluation in health promotion

**551522 Population and Reproductive Health 3(2-2-5)**

Situation of population, population change and impact on health, problems on population and reproductive health, policy of population and reproductive health, reproductive rights, problems of premarital sex, undesired pregnancy, family planning accessibility, sexual transmitted diseases and AIDS, service accessibility and reproductive healthcare services, research in population and reproductive health

**551536 Social Epidemiology 3(2-2-5)**

Concept and theory in social epidemiology and the application for public health planning and problem solving in community, investigation of epidemiology, epidemiological

information, the application of epidemiological information for community diagnosis, problem identification, analysis of causation, and planning for problem solving in community

- 551537 Policy and Health System Reform 3(2-2-5)**  
 Concepts, theories of health policy, factors influencing health policy process among public and private sectors, health policy analysis, health policy management, assessment of health policy utilization, health care reform and comparative health systems, and impacts of health care reform
- 551538 Safety Management in Work Place 3(2-2-5)**  
 Fundamental in occupational health and safety management, investigation and analysis of an accident, management for detriment control, safety system, risk management, personnel safety equipment and emergency equipment management, human behavior and safety behavior in working condition, safety promotion technique in working and safety management system
- 551539 Environmental Health Management in Community 3(2-2-5)**  
 Principles and concepts in system analysis, potential and situation of environmental health, planning controlling managing and evaluating in environmental health such as air pollution noise pollution water pollution, community waste, problem of chemical toxic and hazardous waste, water supply, tap water and sanitation
- 551540 Human Resources Management in Health Care 3(2-2-5)**  
 Health system and components of health system, concepts and situation of health care workforce in developed and developing country, recruitment and selection, human resource development, interprofessional collaboration in developing of health care workforce, compensation and benefit, occupational health and safety of health care workforce, retention of health care workforce
- 551541 Environmental Toxicology in Public Health 3(2-2-5)**  
 An overview of environmental toxicology, impacts of human exposure to toxic substances, toxin mechanisms of action and potential adverse health effects, risk assessment in public health practice, management of toxic pollutants, legislation on toxic pollutants
- 551542 Environmental and Health Impact Assessment 3(2-2-5)**  
 Principles and concepts of environment and health impact assessment (EHIA), Components of EHIA, Analysis of environment and health impact, Writing in EHIA Report, Applying EHIA in public health
- 551543 Public Health Innovation Development 3(2-2-5)**  
 Introduction to innovation, evolution of Thai health Innovation, Thai innovative health concepts, public health, Thai innovation to health for all, the importance and necessity



of innovation in public health, the development of innovative for public health, health strategy innovative health analysis role of public health academician and health innovation

- 551544      Health Promotion in Community      3(2-2-5)**  
 Concepts, theories of health promotion, focusing on promoting prevention in primary care policy strategy measures and procedures for health promotion, holistic health care, community empowerment, The participation of the community in health promotion, Social networks health promotion
- 551545      Public Health Geographic Information Systems      3(2-2-5)**  
 The development of medical geography, geographic information systems in public health, concepts of place and space, medical geography in public health, spatial data and public health geographic, information system database management, mapping public health information, applications of geographic information systems in public health
- 551546      Aging Health Care in Community      3(2-2-5)**  
 The meaning and importance of caring for the elderly, The situation of the elderly, both globally and nationally, Changes in body and mind of the elderly. Environment of the elderly and the residence of the elderly, Social relationships of the elderly, The roles of the community family members and health officers care old people, Social change, the adaptation of the elderly, Needs and expectations of older people, Social support of seniors, Quality of life of elderly Global policy and national policy on care for the elderly
- 551581      Thesis 1, Type A2      3 credits**  
 The elements of thesis or thesis examples in the related field of study, determining thesis title, developing concept paper, and preparing the summary of literature and related research synthesis
- 551582      Thesis 2, Type A2      3 credits**  
 Developing research instruments and research methodology and preparing thesis proposal in order to present it to the Graduate school
- 551583      Thesis 3, Type A2      6 credits**  
 Collecting data, analyzing data, preparing progress report in order to present it to the thesis advisor, and preparing full-text thesis and research article in order to get published according to the graduation criteria
- 551591      Research Methodology in Public Health      3(2-2-5)**  
 Meaning, and aims of research, types and research methodology, review literature, research questions, variable and hypothesis, instrument development, data collection, data analysis, writing of research proposal and report, writing manuscript for publication, research utilization and research ethics
- 551592      Seminar (Non-Credit)      1(0-2-1)**

Studying, searching public health Problem issues in international, national, and regional levels, reviewing literatures and related articles, formulating issues and topic of public health problems of interest and presentation

**Graduation Conditions:**

- A total of 40 credits are required to complete the Master of Public Health program.
- A minimum cumulative 3.00 GPA is the requirement for graduation.
- The student needs a full paper internationally published in a journal or proceedings of an international conference, which is in the database of ISI Web Science or the SCOPUS journal list and must publish at least one study for master level.
- In addition to satisfy the English-language proficiency requirement for master level studies at Naresuan University, international students must meet one of following criteria:

Paper-based TOEFL	450
Computer-based TOEFL	150
Internet-based TOEFL	45
IELTS	5.0
Cambridge Placement Test online	B1 (39)
Naresuan University Writing Proficiency Test	60

**9. Applicant Qualifications:**

- Graduated with a Bachelor's degree or equivalent in public health or health sciences and related field, such as nursing, Medicine, Dentistry, Pharmacy, Medical Technology, Applied Alliance or other related fields, from Institutions accredited by the Ministry of Education. Or the applicant is in the final year of the Bachelor's program and is expected to fulfill the requirements before the first semester starts. All applicants are to have all other qualifications required by the University.
- For those who did graduate degree in another field. Must have experienced working in public health or related field for not less than three years.
- For those who did not conform to the properties 1 and 2. To file a request to be considered for admission. Depending on the discretion of the Master of Public Health Program Committee.

**Document Required:**

1. Academic Transcript and Certifications
2. Copy of ID card and Passport
3. TOEFL or IELTS test report
4. CV and Concept Paper
5. Recommendation Letter

**Contact:**

**Admissions Coordinator:**

For more information, international applicants please contact

1. Assoc. Prof. Supaporn Sudnongbua, PhD  
Associate Dean for International Relations and Global Network  
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\*\*\*The application procedure will complete when TICA has received the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible countries/territories.

**Course Detail**  
**Master of Nursing Science (International Program)**

<b>Course Title:</b>	Master of Nursing Science Program (International Program)
<b>Master Degree:</b>	Full degree: Master of Nursing Science Degree in abbreviation: M.N.S.
<b>Academic Institution:</b>	the Faculty of Nursing, Burapha Univeristy, Chon Buri Province. Clinical practice will be held in hospitals/health care service institutions/communities in Chon Buri Province and nearby provinces
<b>Duration:</b>	2 years (July 2021 – June 2023)

**Curriculum Design****Curriculum Design**

This is a master's degree curriculum.

**Language of Instruction**

English Language

**Admissions**

This program admits both Thai and international students who possess qualifications as specified in the curriculum.

**Collaborations with other institute**

This is an exclusive curriculum of the Faculty of Nursing, Burapha University

**Degree to be awarded to graduates**

The awarded degree is Master of Nursing Science.

**Professional careers in which graduates can practice**

An instructor in a nursing school  
 Practice as a professional nurse/midwife  
 Researcher/academic staff in nursing/health science  
 Manager in nursing/health care organization  
 Independent/private practice in health care services

**Philosophy, significance, and objectives****Philosophy**

The Faculty of Nursing, Burapha University envisions that nursing is the science that is related to the care of health of humans in all conditions and is the service that is essential for the society offered to mankind in every level, personal, group, family, and community. The service is given to people from birth to last minutes of life. The purpose of nursing is to build potential of individual's health development at a maximum level. Therefore, nursing profession needs its own realms of knowledge and continuous intellectual growth.

The Master's Degree in Nursing Science (International Program) curriculum, Faculty of Nursing, Burapha University believes that education at a graduate level in the field of

nursing is the process that can culminate students to be a self-directed learners and can analyze and think systematically, leading to organizational development and effective practice of nursing. Therefore, the curriculum is aimed to graduate nurses who can be academic and practioners who are skillful in nursing. Furthermore, the graduates can integrate science of nursing and other related science, as well as apply research result, empirical evidence, and medical technology in giving care to all human beings. Graduates have awareness of cultural diversity and internationalization, and adhere to morals and ethics. Gradautes are responsible for the society and profession. More importantly, they can incessantly advance their knowledge and skills by learning and preparing their education process through information searching so that they can develop and bring knowledge to apply in providing nursing care.

### **Objectives of the Curriculum**

Upon completion of the Master of Nursing Science Program (Internatinal Program), the graduates will be able to:

1. Acquire advanced knowledge and skills in nursing science and other related science involved nursing practice.
2. Integrate knowledge of nursing science and other related fields, and scientific evidence as a basis for advanced nursing practice to improve the quality of nursing care.
3. Provide nursing care with expertise, moral, ethics, and cultural sensitive care.
4. Conduct research and utilize research results to improve nursing practice or solve problems in health care.
5. Serve as a changing agent in nursing practice, be responsible in the pursuit of self-improvement and assume accountability for the ongoing acquisition of knowledge and skills in the profession.
6. Communicate and work collaboratively in the interdisciplinary health care team including devlope a networking nationally and internationally.

### **Educaiton Management System**

#### **System**

This curriculum is a two-semester system; the duration of study of each semester is not less than 15 weeks

#### **Summer Semester System**

None

#### **Equivalent Credits in the Semester System**

None

### **Implementation of the Curriculum**

#### **Day and Time of Instruction**

First semester July to November

Second semester November to March

#### **Qualifications / Criteria of the Intakes**

2.2.1 In accordance with university qualifications on graduate education.

2.2.2 Hold a bachelor's degree in nursing or equivalent and have a professional license in Nursing and midwifery. For non-Thai national, the applicants must completed the Bachelor's degree in nursing or equivalent as well as holding nursing profession license which was approved by professional nursing council or the responsible organization or certified by the Nursing Regulatory Authority in the applicant's country.

2.2.3 Possess nurse experience at least one year until the date of application.

2.2.4 The results of English proficiency test with a minimum 500 on TOEFL or IELTS score of at least 5.5 or equivalent in other forms and approved by Burapha University.

2.2.5 In the case that the qualification is not in accordance with 2.2.1 to 2.2.4, admission is at the discretion of the curriculum board.

### **Education Management System**

- Classroom System
- Internet Conferencing System

## **Curriculum and Instructors**

### **Curriculum**

#### **Number of credit requirements**

**Plan A type A 2** not less than 36 credits

#### **Curriculum Structure**

##### **Plan A type A 2**

Required Courses 21 credits

Elective Coures not less than 3 credits

Thesis 12 credits

#### **Courses**

##### **Plan A type A 2**

**Required Course 21 credits**

**1. Core Courses 9 credits**

1075016 Nursing Theories and Concepts 2(2-0-4)

0

1075026 Applied Statistics for Nursing Research 2(2-0-4)

0

1075036 Policy and Health System 2(2-0-4)

0

1075046 Nursing Research and Research Utilization 3(3-0-6)

0

**Specialty Courses 12 credits**

1115016 Integrated Health Sciences in Nursing\* 2(2-0-4)

0

(\*For student who study in Nursing Administration enroll course 11154360 instead)

**Students enroll 4 more courses from a specialty selected pathways 10 credits**

**Courses for Community Nursing Pathway**

1115116	Advanced Community Nursing I	2(2-0-4)
0		
1115126	Advanced Community Nursing II	2(2-0-4)
0		
1115136	Advanced Community Nursing Practicum I	3(0-9-3)
0		
1116146	Advanced Community Nursing Practicum II	3(0-9-3)
0		

**Courses for Maternity Nursing and Midwifery Pathway**

1115216	Advanced Maternity Nursing and Midwifery I	2(2-0-4)
0		
1115226	Advanced Maternity Nursing and Midwifery II	2(2-0-4)
0		
1115236	Advanced Maternity Nursing and Midwifery Practicum I	3(0-9-3)
0		
1116246	Advanced Maternity Nursing and Midwifery Practicum II	3(0-9-3)
0		

**Courses for Adult Nursing Pathway**

1115316	Advanced Adult Nursing I	2(2-0-4)
0		
1115326	Advanced Adult Nursing II	2(2-0-4)
0		
1115336	Advanced Adult Nursing Practicum I	3(0-9-3)
0		
1116346	Advanced Adult Nursing Practicum II	3(0-9-3)
0		

**Courses for Gerontological Nursing Pathway**

1115516	Advanced Gerontological Nursing I	2(2-0-4)
0		
1115526	Advanced Gerontological Nursing II	2 (2-0-4)
0		
1115536	Advanced Gerontological Nursing Practicum I	3(0-9-3)
0		
1116546	Advanced Gerontological Nursing Practicum II	3(0-9-3)
0		

**Courses for Psychiatric & Mental Health Nursing Pathway**

1115616	Advanced Psychiatric & Mental Health Nursing I	2(2-0-4)
0		

1115626	Advanced Psychiatric & Mental Health Nursing II	2(2-0-4)
0		
1115636	Advanced Psychiatric & Mental Health Nursing Practicum I	3(0-9-3)
0		
1116646	Advanced Psychiatric & Mental Health Nursing Practicum	3(0-9-3)
0	II	

#### **Courses for Pediatric Nursing Pathway**

1115716	Advanced Pediatric Nursing I	2(2-0-4)
0		
1115726	Advanced Pediatric Nursing II	2(2-0-4)
0		
1115736	Advanced Pediatric Nursing Practicum I	3(0-9-3)
0		
1116746	Advanced Pediatric Nursing Practicum II	3(0-9-3)
0		

#### **Courses for Nursing Administration Pathway**

1115416	Human Resource Management in Nursing Organization	2(2-0-4)
0		
11154260	Health Service Management in Health Care Organization	2(2-0-4)
1115436	Leadership and Management in Nursing Organization	2(2-0-4)
0		
1115446	Nursing Administration Practicum	3(0-9-0)
0		
1116456	Health Care Quality Management Practicum	3(0-9-3)
0		

<b>Elective course*</b>	<b>not less than</b>	<b>3</b>	<b>credits</b>
1116036	Concept and Role of Advanced Nursing Practice	3(3-0-6)	
0			
1116046	Curriculum and Teaching Learning in Nursing Science	3(3-0-6)	
0			
1116056	Family and Illness	3(3-0-6)	
0			
1116066	Health Behavior and Health Promotion and Prevention	3(3-0-6)	
0			

**\* Students can select the other courses at the graduate level which offered in Burapha University or other institutions under the approval of the committee of the program.**

<b>Thesis</b>		<b>12</b>	<b>credits</b>
1116996	Thesis	12(0-0-36)	
0			



**Meaning of Subject Code**

Number 1 of course codes represents courses of the Faculty of Nursing

Number 2 and 3 of course codes represents course of the international program;

for example 11 represents course of international programs.

Number 4 of course code represents courses at a master's level:

Number 5 represents courses offered in the first year of program.

Number 6 represents courses offered in the second year of program.

Number 5 and 6 of the code represents specialized nursing pathways and the order of the courses.

Code of thesis course uses the last three numbers 699

**Study Plan**

The study plan of the Master's Degree in Nursing Science (International Program) curriculum is as follows:

**First Year: First Semester**

<b>Category</b>	<b>Course code and title</b>		<b>Credit (Theory-Practice- Self study)</b>
Core course	10750160	Nursing Theories and Concepts	2(2-0-4)
	10750260	Applied Statistics for Nursing Research	2(2-0-4)
Specialty course	11150160	Integrated Health Sciences and Nursing	2(2-0-4)
		For student who study in Nursing Administration Pathway, substitute the course 11150160 with the course 11154360 Leadership and Management in Nursing Organization 2(2-0-4)	
	1115xxx x	Theory course number 1 from a selected pathway	2(2-0-4)
<b>Total</b>			<b>8</b>

**First Year: Second Semester**

<b>Category</b>	<b>Course code and title</b>		<b>Credit (Theory-Practice- Self study)</b>
Core course	10750360	Policy and Health System	2(2-0-4)
	10750460	Nursing Research and Research Utilization	3(3-0-6)

Specialty course	1115xxx x	Theory course number 2 from a selected pathway	2(2-0-4)
	1115xxx x	Practical course number 1 from a selected pathway	3(0-9-0)
<b>Total</b>			<b>10</b>

### Second Year: First Semester

Category	Course code and title		Credit (Theory-Practice-Self study)
Specialty course	1116xxx x	Practical course number 2 from a selected pathway	3(0-9-3)
Elective course	111xxxx x	Elective course	3(3-0-6)
Thesis	1116996 0	Thesis	6(0-0-18)
<b>Total</b>			<b>12</b>

### Second Year: Second Semester

Category	Course code and title		Credit (Theory-Practice-Self study)
Thesis	1116996 0	Thesis	6(0-0-18)
<b>Total</b>			<b>6</b>

### Course Descriptions

(Attachment Number 1)

#### Element of the Course with Nursing Practice

Students will have clinical practicum in health care institutions/community as professional nurses for 270 hours (6 credits). The ratio of instructors: practical students is 1: 4.

#### Standard Learning Outcome of Nursing Practice

Be able to design nursing interventions and evaluate nursing outcomes in populations served by using nursing concepts/theories and related concepts, as well as the use of empirical and research evidence.

Perform in the role of nurse in the care of patients according to their interests by using the science of nursing and adhere to morals, professional code of ethics and law.

Serve as a lead and a team member in health team.

#### Time of Clinical Practice Courses

First semester of the second academic year

### **Time Arrangement and Course Schedule**

Time and schedule is arranged in regular business hours, two days/week (8.00-16.00 hrs.). Altogether the practice hours are no more than 9 hours/week.

### **Requisites related to project or research (if there is)**

#### **Brief Description**

Students are required to do a thesis related to nursing according to student's interest under the supervision of an advisor.

#### **Learning Outcomes**

Students should be able to conduct a research project by using rigorous research methods for improving nursing practice and can publish the research in a peer-review journal as listed in Thai-Journal Citation Index Centre.

#### **Duration**

Research will start in the first semester of the second academic year

#### **Number of Credits**

12 Credits

#### **Preparation**

For students to be able to achieve the process of research/thesis and graduate on the planned time frame, there are the following preparations:

Workshop for master thesis process

Setting a system for assigning advisors

Students and advisors meet and consult to develop a thesis topic and research proposal.

Students follow the steps in the research process and advisors direct and oversee as well as be supportive.

#### **Process of Evaluation**

The process of evaluation are as follows:

Students undergo a proposal defense conducted by a proposal consultative committee appointed according to the university's regulations.

Students submit a thesis and undergo oral defense under the direction of the committee.

Students publish the research in a peer-reviewed journal.

### **For more information:**

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## Course Detail

### **Master of Science in Pharmacy Program in Clinical Pharmacy (International Program)**

<b>Course Title:</b>	Master of Science in Pharmacy Program in Clinical Pharmacy (International Program)
<b>Master Degree:</b>	Master of Science in Pharmacy (Clinical Pharmacy)
<b>Academic Institution:</b>	Faculty of Pharmacy, Departments of Pharmacy
<b>Duration:</b>	1 - 2 years B.E. 2563-2565

#### **Background and Rational:**

Current circumstances or economic development that are taken into account for curriculum planning are derived from a framework of Economics and Social Development Plan No. 12 (2017-2022). It is under the management philosophy of sufficient economy to accommodate the changes that have affected both positive and negative aspects for Thailand. This strengthens and utilizes existing potentials to be beneficial for country development by giving priority to local economy focusing on the solidification of the production base in agriculture and adaptation to link with global and regional economy. Thailand has an obligation under the framework of multiple co-operations to take an appropriate step towards the ASEAN Economics Community (AEC) in 2015. Therefore, the establishment of human development and wisdom and learning society are in need. In addition, the strategic goals of the national policy on drug strategy 2011 and the development of national drug policy 2011-2016 aim for prevention and the improvement of healthcare standards to the public. Those embrace quality assurance, safety and effectiveness of drugs, promoting the rational use of drugs, promoting equitable access to medicines sustainably and promptly, creating pharmacovigilance system, and developing pharmaceutical industry for long self-sustainable. The National Health Security Office (NHSO), an organization under the supervision of the Ministry of Public Health, has main responsibility in the effective management of the National Health Security Fund. NHSO developed health service systems to assure that the public can access to the qualified services to accomplish the vision, said "Everyone who lives in Thailand is under the Universal Healthcare Coverage Scheme". A mission related to public health is to improve healthcare services under various health insurance schemes for quality standards that are accessible to everyone and satisfy to citizens and service providers.

However, considering the high cost of healthcare including the cost of medicines and medical supplies in Thailand, this could be caused by irrational drug use or the patient's non-adherence to treatments. Consequently, patients do not gain treatment benefits as it should be, or need to change treatment modalities or medications that commonly lead to higher medical expenses. Moreover, Thailand is entering to an aging society which this population needs cautions in drug use. Such problems can be prevented by health professional co-operation as multidisciplinary team. Fulfilling of this co-operation can improve the overall healthcare

standards in the public. The pharmacist, a key mechanism as drug expert in a multidisciplinary team, can take the role of clinical pharmacy into action.

Currently, the operational benchmarks for professional hospital pharmacy has been established for use as a guidance in pharmaceutical care or clinical pharmacy services for both governmental and private hospitals. Clinical pharmacy services have been designated as one of the standard professional pharmacist operations to support the roles of hospital pharmacists in patient care, which require skills and knowledges of clinical pharmacy-related activities. This was conducted in parallel with the development of hospital accreditation, one of the indicators used to certify hospital pharmacy services across the country. In order to comply with the philosophy of Mahidol University said, “True success is not in the learning, but in its application to the benefit of mankind”, the operations to achieve these objectives require skillful staff who can integrate knowledges in healthcare and social sciences effectively. Pharmacist who expertises in clinical pharmacy is considered as the priority, which is preferred by both the public and private organizations to foster success as mentioned above.

As a result of less skillful clinical pharmacists and low rate of pharmacists pursuing continuing education in clinical pharmacy, Faculty of Pharmacy Mahidol University, as the main entity responsible for administration of clinical pharmacy program, has updated its curriculum for Master of Science (M.Sc.) Program in Clinical Pharmacy (International program) according to the 12th National Economics and Social Development Plan (2017-2022), the national strategic plan on drug policy (2011), and the national drug system development strategy (2011-2016) with the aims to develop personnel working in both government and private healthcare organizations with high-level competency, proficiency, creativity, morality and ethics in pharmaceutical care, excellent communication skill and health-related technology, and be capable of developing applicable knowledge through clinical research that satisfy the users. In addition, such personnel can be able to prevent and solve healthcare problems by assuring quality, safety, and effectiveness of drugs, promoting rational drug use and equal, sustainable and timely access to essential medicine, creating effective surveillance mechanisms for drug utilization and facilitating development of pharmaceutical industry for sustainable self-reliance of the nation. Faculty of Pharmacy Mahidol University is ready in terms of faculty members, research materials and facilities, laboratory for clinical research, buildings and academic partners to support the M.Sc. program which in turn gear up national economics and help maximize the benefit of knowledge in clinical pharmacy for developing the country in the future.

### **Objectives:**

After completion their study, students will have characteristics which comply with Thailand Quality Framework standard as follows:

1. Possess moral, ethics and professional ethics, including ethics for human research and research code of conduct
2. Possess knowledge that is relevant to clinical pharmacy research and practice

3. Possess cognitive skills in searching, analyzing, synthesizing relevant information and effectively conducting research, and advance clinical pharmacy research and practice
4. Express opinions, be academic and professional leader, possess creative ideas, social responsibility, interpersonal and interactive skills
5. Possess appropriate communication skill and informative technology utilization for various groups in both academic and professional sectors along with ability to use information technology to analyze and present research data effectively

### Expected Learning Outcomes

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

1. Apply knowledge on characteristics of diseases and pharmacotherapy principle.
2. Inter-relate pharmacotherapy principles to practice.
3. Analyze drug-related problems or disease problems, develop solutions and justify professional decisions.
4. Demonstrate moral, ethics and professional ethics in accordance to social norm and professional standard along with personal accountability in executing professional decisions, leadership, communication and application of knowledge and skills.
5. Appraise and critically evaluate published information and present it in written or oral format using appropriate information technology technique.
6. Conduct clinical pharmacy research.

### Course Synopsis & Methodology:

#### 1. Study plan:

Year	Semester 1			Semester 2		
1	PYCP 666	Pharmaceutical Care I	3(3-0-6)	PYCP 668	Clinical Pharmacy and Clerkship I	3(2-3-5)
		Research				
	PYID 685	Methodology in Pharmacy I	2(2-0-4)	PYCP 648	Seminar in Clinical Pharmacy I	1(1-0-2)
		Elective Courses	6 credits		Elective Courses	6 credits
	<b>Total</b>		11 credits	<b>Total</b>		10 credits
2	PYCP 649	Seminar in Clinical Pharmacy II	1(1-0-2)	PYID 698	Thesis (continued)	6(0-18-0)
	PYCP 670	Special Problems in Clinical Pharmacy	2(0-6-2)			
	PYID 698	Thesis	6(0-18-0)			
		<b>Total</b>		9 credits	<b>Total</b>	

## 2. Course Content/Study Topic: Program Structure

### *Credit Requirements*

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

1. Required Courses	12 credits
2. Elective Courses (at least)	12 credits
3. Thesis	12 credits
<b>Total no less than</b>	<b>36 credits</b>

### *Required Courses*

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

### *Elective Courses*

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

<u>Course ID</u>	<u>Course Name</u>	<u>Credit(s)</u>
GRID 603	Biostatistics	3 (3-0-6)
PYCP 627	Therapeutic Drug Monitoring	3 (3-0-6)
PYCP 644	Drug Information Service	2 (2-0-3)
PYCP 667	Pharmaceutical Care II	3 (3-0-6)
PYCP 669	Clinical Pharmacy and Clerkship II	3 (2-3-5)
PYCP 704	Rational Drug Use	2 (2-0-4)
PYCP 689	Pharmacotherapeutics in Geriatrics	2 (2-0-4)
PYCP 703	Pharmacovigilance	3 (3-0-6)

### *Thesis*

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



**Applicants Qualifications:**

1. Degree holding and cumulative GPA
  - Graduated with a Bachelor Degree in Pharmacy or Doctor of Pharmacy (Pharm.D.) from programs accredited by the Office of Higher Education Commission (OHEC) with GPA of at least 3.50
2. Have an English proficiency test score as the requirement of Faculty of Graduate Studies
3. Other exceptions will be considered by the Program Director and the Dean of Faculty of Graduate Studies, Mahidol University.

**Document Required:**

1. Application form
2. Transcript
3. Certificate of English of proficiency
4. Statement of purpose and draft of thesis proposal

**Contacts:**

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## Course Detail

### Master of Science Program in Regulatory Science for Pharmaceutical and Health Products (International Program)

<b>Course Title:</b>	Master of Science Program in Regulatory Science for Pharmaceutical and Health Products (International Program)
<b>Master Degree:</b>	Master of Science (Regulatory Science for Pharmaceutical and Health Products)
<b>Academic Institution:</b>	Faculty of Pharmacy, Departments of Microbiology, Pharmacy, Pharmaceutical Chemistry, Pharmacology and Manufacturing Pharmacy
<b>Duration:</b>	B.E. 2563-2565

#### Background and Rational:

Master of Science Program in Regulatory Science for Pharmaceutical and Health Products (International Program) is the first program in Thailand that offers body of knowledge as well as practical aspects in regulation of pharmaceutical and health products. The program is designed as integrated and multidisciplinary curriculum by collaborations of several departments including Pharmaceutical Chemistry, Pharmaceutical Manufacturing, Pharmacology, Microbiology and Pharmacy. The program involves both Thai and international regulations (EU, US, ASEAN and Japan) and complied with Thailand 4.0 policy. The program is driven by high caliber and high expertise faculty member. The learning process is designed as modules based on active learning, outcome based and problem based education. Lecture, laboratory, hand-on experiences as well as trainings in real sectors are provided for students. Students can get access to well-equipped laboratories, libraries and information technology facilities with necessary database. Research questions or thematic paper could be originated from students, which can be benefit to their future career and the graduates could pursue their careers in regulatory affairs in both governmental and private sectors. Upon the completion from the program, the graduates will be knowledgeable and skillful to work in the area of regulatory science in pharmaceutical and health products.

#### Objectives:

By the end of the study, students are able to

1. Possess moral, professional ethics and responsibility in the field of regulatory science for pharmaceutical and health products
2. Analyze and apply the knowledge in regulatory science for pharmaceutical and health products

3. Think critically, to analyze problems, to integrate and to synthesize knowledge in the field of regulatory science for pharmaceutical and health products

4. Have inter-personal skill with responsibility, management and leadership skills to effectively communicate and collaborate with intra- and inter-organizations in quality control of pharmaceutical and health products

5. Possess numerical and information technology skills required in regulatory science for pharmaceutical and health products

### Course Synopsis & Methodology:

#### 1. Study plan:

##### Plan B

Year	Semester 1	Semester 2
1	PYRS 500 Regulation of Drug and Health Products 3(3-0-6) PYRS 501 Management and Professional Skills in Regulatory Affairs 3(3-0-6) PYRS 504 International Approaches to Regulation 3(3-0-6) PYRS 505 Principles of Risk Management and Vigilance System for Health Products 2(2-0-4)	PYRS 502 Quality Management System and Quality Assurance 3(3-0-6) PYRS 507 Seminar in Regulatory Science II 1(1-0-2) PYRS 508 Process of Drug Discovery and Pharmaceutical Product Discovery and Pharmaceutical Product Development 3(3-0-6) Elective courses 6 credits PYRS 698 Thematic paper 2(0-18-0)
	PYRS 506 Seminar in Regulatory Science I 1(1-0-2) PYRS 503 Statistics in Regulatory Science for Pharmaceutical Products 3(3-0-6)	
	<b>Total 15 credits</b>	<b>Total 15 credits</b>
2	Elective courses 2 credits PYRS 698 Thematic paper 2(0-18-0) <b>Total 4 credits</b>	PYRS 698 Thematic paper 2(0-18-0) <b>Total 2 credits</b>

**2. Course Content/Study Topic:****Courses in the curriculum**

<b>(1) Required Courses</b>	<b>18 credits</b>
<b>(2) Elective Courses:</b> Not less than	12 credits
<b>(3) Thematic paper</b>	6 credits

**1) Required Courses 18 credits****Credits (Lecture-Practice-Self Study)**

PYRS 500	Regulation of Drug and Health Products	3(3-0-6)
PYRS 501	Management and Professional Skills in Regulatory Affairs	3(3-0-6)
PYRS 502	Quality Management System and Quality Assurance	3(3-0-6)
PYRS 503	Statistics in Regulatory Science for Pharmaceutical Products	3(3-0-6)
PYRS 504	International Approaches to Regulation	3(3-0-6)
PYRS 505	Principles of Risk Management and Vigilance System for Health Products	2(2-0-4)
PYRS 506	Seminar in Regulatory Science I	1(1-0-2)

**2) Elective Courses:** Not less than 12 credits**Credits (Lecture-Practice-Self Study)**

PYRS 507	Seminar in Regulatory Science II	1(1-0-2)
PYRS 508	Process of Drug Discovery and Pharmaceutical Product Development	3(3-0-6)
PYRS 509	Regulation of Biological Products	2(2-0-4)
PYRS 510	Risk Management Tools for Pharmaceutical Industry	2(2-0-4)
PYRS 511	Structure and Management of Clinical Trials	2(2-0-4)
PYRS 512	Intellectual Properties for Health Products	2(2-0-4)
PYRS 513	Pharmaceutical Commerce	2(2-0-4)
PYRS 514	Regulation of Food and Dietary Supplements	2(2-0-4)
PYRS 515	Regulatory of medical device	2(2-0-4)

In addition to elective courses mentioned above, a student may register other courses in international program offered by other faculties' equivalent to graduate studies, Mahidol University or the ones offered by other universities according to the student's interest with the approval of the curriculum committee or the advisor.

**Thematic paper**

	Credits (lecture – practice – self-study)
PYRS 697 Thematic paper	6(0-36-0)

## **Applicants Qualifications:**

### **Plan B**

1. Prospective students should hold a Bachelor's degree in the area of pharmacy or related health science from Institutions of Higher Education in Thailand or foreign countries accredited by the office of the Higher Education Commission with a minimum GPA of 2.50 or equivalent
2. Prospective students should have the English competency that meet the requirements of the Faculty of Graduate Studies, Mahidol University (e.g. TOEFL score of at least 400 or the total IELTS score of at least 3 or any other equivalent scores.
3. Prospective students should have experience in regulatory of health products at least one year.
4. Other exceptions may be considered by the Program Committee and the Dean of the Faculty of Graduate Studies, Mahidol University.

### **Document Required:**

1. Transcript
2. CV with a statement of purpose
3. TOEFL or IELST score

### **Contacts:**

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### **Program staff:**

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## Course Detail

### Master of Primary Health Care Management Program (International program)

<b>Course Title:</b>	Master of Primary Health Care Management Program (International program)
<b>Master degree:</b>	Master of Primary Health Care Management
<b>Academic institute:</b>	ASEAN Institute for Health Development, Mahidol University
<b>Duration:</b>	August 2021-July 2022

#### **Background and Rational:**

Master of Primary Health Care Management degree program has been operated since the year 1986 with the cooperation between ASEAN Institute for Health Development (AIHD), Mahidol University. And Thailand International Cooperation Development Agency (TICA), Ministry of Foreign Affairs and the Japan International Cooperation Agency (JICA). The program emphasizes the development of managerial and leadership skills for medical and paramedical public health care professionals from all over the world, especially Asia. PHC development is recognized as an appropriate channel for public health service in the improvement of existing human resources, making use of appropriate technology, and encouraging community participation. Since 1986, AIHD has produced 700 graduates from 34 countries, currently working as PHC leaders with the common goals of efficient and effective health services and improvement in the quality of life.

#### **Objectives**

The curriculum prepares students to become leading public health professionals capable of addressing current primary health care and global health problems with multidisciplinary, evidence-based approaches.

#### **Course Synopsis and Methodology:**

##### **Study plan**

A minimum of 36 credits are required; require course 15 credits, elective course 9 credits, and thesis 12 credits.

<b>Semester 1</b>	<i>(August-December 2021)</i>	
	Require course	9 Credits
	Elective course	6 Credits

<b>Semester 2</b>	<i>(January-April 2022)</i>	
	Require course	6 Credits
	Elective course	3 Credits
	Thesis	6 Credits
<b>Summer</b>	<i>(April-July 2022)</i>	
	Thesis	6 Credits
<b>Total</b>		36 Credits

**Plan for master degree thesis**

<b>Thesis Process</b>	<b>Month</b>
Proposal development	September-January
Proposal exam	February
Data collection (Their home country)	April
Data analysis	May
Thesis writing	June
Thesis defense & Publication	July

**2. Course contents****Require course 15 Credits**

ADPM 602	Health Service and Primary Health Care Management	3 Credits
ADPM 603	Epidemiology for Primary Health Care Management	3 Credits
ADPM 622	Management of Environmental Health for Sustainable Development	3 Credits
ADPM 629	Research Methodology for Primary Health Care	3 Credits
ADPM 611	Health Promotion in Primary Health Care	2 Credits
ADPM 697	Thesis Seminar	1 Credits

**Elective course not less than 9 Credits**

ADPM 612	Leadership and Health Team Development	2 Credits
ADPM 613	Health Economics	2 Credits
ADPM 614	Primary Health Care and Global Health	2 Credits
ADPM 615	Professional Training Management in Primary Health Care	2 Credits
ADPM 619	Field Study	2 Credits
ADPM 631	Strategic Purchasing for Universal Health Coverage	2 Credits
ADPM 632	Health Providers in Health Systems	2 Credits
ADPM 633	Health Financing for Social Health Protection	2 Credits
ADPM 634	Health Economics	2 Credits
ADPM 636	Socio-economic and Cultural Perspective in Health	2 Credits
ADPM 638	Health Communication for Primary Health Care Management	2 Credits
ADPM 639	Health Systems Policies	2 Credits
ADPM 656	Applied Statistics for Health Science Research	3 Credits
ADPM 695	Sufficiency Economy Philosophy for Primary Health Care Management	2 Credits
ADPM 696	Principle Concept and Practice of One Health	2 Credits



ADPM 698 Thesis

12 Credits

**Grand Total:** not less than 36 Credits**Graduate requirements:**

- For graduates with a bachelor degree admission to master degree, the course of time throughout must not exceed 5 years.
- Complete the coursework for not less than 24 credits and 12 credits for thesis, with minimum total of 36 credits and must have a minimum cumulative grade point average of 3.00.
- Must pass the English proficiency examination for graduates of Mahidol University or IELTS/TOEFL equivalent.
- Must pass the soft skills graduates of Mahidol University
- Must pass the thesis examination and submit the thesis following the regulations of the Faculty of Graduate Studies.
- A document indicated published or accepted for publication in an peer-reviewed international conference proceeding or journal according to the Faculty of Graduate Studies requirement

**Application qualifications:**

All applicants must fulfill the following:

- Graduated with a degree in medicine and health related field
- Grade point average > 2.50 or > 75 per cent
- Good command of English (TOEFL score of 500 and above or IELTS score with a minimum of 5)
- If an applicant does not meet the above criteria but has other suitable qualifications and experience, s/he may be considered to apply for admission by the program committee

**Document require for admission:**

- Academic transcript
- English proficiency certificate
- Curriculum Vitae
- A recommendation letter
- A draft of research project to be conducted as master degree thesis

**Contact:****1. Contact: Program director****Asst. Prof. Dr. Phudit Tejativaddhana**

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**2. Program coordinator**

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**Course Detail**  
**Master of Science Program in Biomedical Sciences (International Program)**

<b>Course Title:</b>	Master of Science Program in Biomedical Sciences
<b>Master Degree</b>	Master of Science (Biomedical Sciences) M.Sc. (Biomedical Sciences)
<b>Academic Institution</b>	School of Allied Health Sciences, Walailak University
<b>Duration</b>	2 years (May, 2021-April, 2023)

**Background and Rational**

Graduate of Master of Science Program in Biomedical Sciences is aimed for developing new state of the art in medical science and bioscience in a wide range of fields such as molecular biology, human genetics, cytogenetics, medical biochemistry, oncology, stem cell technology, biotechnology, nutrition, toxicology, hematology, immunology, microbiology, kinesiology and physical therapy, bioinformatics, and medical innovation. Teaching both theory and practice is an attempt to enhance learners who will apply knowledge in research on medical science and bioscience.

Both theory and practice are focused on applying the knowledge to research in medical science and bioscience. Laboratory techniques and research methodology play an important role in enabling the graduates to gain knowledge and skills and to conduct research following academic progress. They are able to integrate effectively between modern technology and grounded theory in order to establish groundbreaking body of knowledge. In addition, the graduates are expected to work efficiently in collaboration with health science team, to acquire considerable interpersonal skills, to adopt morality and ethics, and to have responsibility to self and society as well.

**Objectives**

1. To develop an advanced academic knowledge in the field of Biomedical Sciences with integration, application, and innovation the new knowledge
2. To develop the skills of thinking, analyzing, and synthesizing systematically with able to solve the problem effectively in various situations
3. To generate and create the academic progress continuously, and develop biomedical researches for benefit and impact to the society
4. To publicize and exchange the academic knowledge at the international level
5. To develop a moral person, professional ethics, and ethical research with the responsibility for themselves and society

**Course Synopsis and Methodology**

**Study Plan**

: Trimester system (12 weeks/semester)

: Research program (45 credits) with seminar

<b>Year</b>	<b>1<sup>st</sup> semester</b>	<b>2<sup>nd</sup> semester</b>	<b>3<sup>rd</sup> semester</b>
1	Thesis (5 credits)	BMS seminar Thesis (8 credits)	Thesis (8 credits)
<b>Total</b>	<b>21 credits</b>		
2	Thesis (8 credits)	Thesis (9 credits)	Thesis (7 credits)
<b>Total</b>	<b>24 credits</b>		

**Course Content/ Study Topic****Required courses****Thesis**

Research study in biomedical sciences for plan A1; development of research methodology including research design, conducting research proposal, data collection and analysis; manuscript preparation and publication in a peer-reviewed national or international journal; thesis report and defense under supervision of the thesis advisory committee; moral and code of ethics for research

**Biomedical Sciences Seminar I**

A review of current research publications and advanced topics in biomedical sciences; analysis, discussion, conclusion, preparation and presentation

**Graduation Conditions**

1. Complete one's full-time studies according to curricula structures.
2. Complete all required courses and obtain a grading record that satisfies the requirements of the program.
3. Meet the non-native language proficiency requirements.
4. Pass a thesis examination with the result Passed (if Passed with Conditions, the student must revise the thesis until the result shows Passed).
5. Submit a document that shows that the thesis or a part of the thesis is (1) published or (2) accepted for publication in a journal (ISI/SCOPUS).

**Applicants Qualifications**

1. Hold a Bachelor of Science (B.Sc. degree) or equivalent with GPAX of at least 3.50 of total 4.00 or equivalent,
2. English test results meet the criteria TOEFL (Paper-based) 550 or equivalent,
3. Meet specific requirements set by the Program Committee

**Document Required**

1. The program application (TIPP); the application form could be downloaded from this linked URL <http://tica.thaigov.net/main/en/relation/75500-TIPP-Application-form.html>
2. The academic qualifications/transcript
3. Applicants from a country where English is not the first language must enclose English proficiency test result. The result must not be more than two years. The applicants should have an English proficiency score of TOEFL Paper-based: 550 or equivalent. Prepare a concept proposal or statement of purpose essay on your proposed thesis topic.
4. A copy of your passport
5. Curriculum vitae (CV)
6. Recommendation Letter

**Contacts****1. Program Chairperson**

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\*\*\*The application procedure will complete when TICA has received the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible countries/ territories.

### **Course Detail**

#### **Master of Science in Occupational and Environmental Health (International Program)**

<b>Course Title:</b>	Master of Science (Occupational and Environmental Health) (International Programme)
<b>Master Degree:</b>	Master of Science (Occupational and Environmental Health) M.Sc. (Occupational and Environmental Health)
<b>Academic Institution:</b>	Faculty of Public Health, Thammasat University
<b>Duration:</b>	18 months (minimum)

#### **Background and Rational**

This course aims to produce researchers with special skills in these areas equipped with up-to-date knowledge of relevant technological innovations. There is comprehensive coverage of theory and practice and an emphasis on the development of research skills enabling students to apply their knowledge to find practical solutions to real public health issues.

The M.Sc. provides the necessary skills, knowledge, and competencies to enable students to critically evaluate risk posed by the full range of occupational and environmental health hazards, or stressors, which have impacts on human health and well-being. Courses will be delivered by academic staff with wide practical experience as well as active research interests.

The course is conducted using a practically-based teaching and learning processes including lectures, workshops, group work, case studies, practical assignments, site visits, and student centered learning. This ensures graduates to gain experience on the challenge of current problem-based research and state of the art methods.

This program offers several specialized subjects in three fields; occupational health, ergonomics, and safety and environmental health. It will be conducted in a semester system with 36 credits in total. For the first two semesters, students focus on core compulsory courses and scientific topics related to their selected fields of study. Elective courses complement the core courses and their interested research topics.

#### **Objective:**

The M.Sc. (Occupational and Environmental Health) provides graduates with: 1) developing technical competence necessary to successful academic and professional work; 2) acquiring and integrating knowledge and skills from a variety of occupational and environmental health perspectives in order to become effective problem solvers, innovators, and decision makers; and 3) mastering the knowledge and practice in occupational and environmental health through the process of research and field practice.

**STUDY PLAN****Course Content/Study Topic:***a. Pre-program workshop*

FIRST YEAR	
<b>Plan A (Thesis Track)</b>	
<b>First semester</b>	
OE60 Statistics and Research Methodology 1	3 credits
OE61 Occupational and Environmental Epidemiology 1	3 credits
OE63 Occupational and Environmental Health 1	3 credits
OE66 Occupational and Environmental Health Seminar (non-credit) 1	1 credit
OE6x Compulsory in concentration x	3 credits
<b>Total</b>	<b>13 Credits</b>
<b>Second semester</b>	
OE6x Compulsory in concentration x	3 credits
OE6x Compulsory in concentration x	3 credits
OE6x Electives x	3 credits
OE6x Electives x	3 credits
OE80 Thesis 0	3 credits
<b>Total</b>	<b>15 credits</b>
SECOND YEAR	
<b>First semester</b>	
OE80 Thesis 0	9 credits
<b>Total</b>	<b>9 credits</b>

Although the pre-program workshop is considered as a non-credit co-curricular learning experience, all enrolled students are expected to participate prior to registration in the 1<sup>st</sup> semester of the academic year.

*b. Core compulsory courses*

Students must complete a total of 9 credits and Occupational and Environmental Health Seminar (credit not counted) of the following Occupational and Environmental Health core courses:

OE 611: Occupational and Environmental Epidemiology	3 (3-0-9)	Credits
OE 601: Statistics and Research Methodology	3 (3-0-9)	Credits
OE 631: Occupational and Environmental Health	3 (3-0-9)	Credits

**Compulsory course (credit not counted)**

OE 661: Occupational and Environmental Health Seminar	1 (0-2-4)	Credits
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**c. Compulsory in field courses**

Students must complete a total of 9 credits of the following compulsory courses:

**Concentration on Occupational Health**

OE 621: Occupational and Environmental Toxicology	3 (3-0-9)	Credits
OE 632: Occupational and Environmental Sampling and Analysis	3 (2-3-7)	Credits
OE 633: Workplace Exposure Assessment and Control	3 (3-0-9)	Credits

**Concentration on Environmental Health**

OE 621: Occupational and Environmental Toxicology	3 (3-0-9)	Credits
OE 632: Occupational and Environmental Sampling and Analysis	3 (2-3-7)	Credits
OE 651 Environmental Health Technology	3 (3-0-9)	Credits

**d. Elective courses**

Plan-A: Students opting for Plan-A must select at least 6 credits of coursework from either minor concentration courses or the following set of free electives courses.

OE 602	: Advanced Statistics for Occupational and Environmental Health		
Research		3	(3-0-9)
Credits			
OE 612	Molecular Epidemiology	3 (3-0-9)	Credits
OE 634	Risk Assessment and Management	3	(3-0-9)
Credits			
OE 635	Air Pollution and Control	3 (3-0-9)	Credits
OE 636	Indoor Air Quality and Control	3 (3-0-9)	Credits
OE 641	Safety Engineering	3 (3-0-9)	Credits
OE 642	Safety, Health and Environmental Management	3 (3-0-9)	Credits
OE 643	Human Factors and Ergonomics	3 (3-0-9)	Credits
OE 644	Task Analysis and Design	3 (3-0-9)	Credits
OE 652	Environmental and Health Impact Assessment	3 (3-0-9)	Credits
OE 653	Waste Management	3 (3-0-9)	Credits
OE 654	Water and Waste Water management	3 (3-0-9)	Credits
OE 655	Disaster Management	3 (3-0-9)	Credits
Thesis (Plan-A)			
OE 800: Thesis		12	
Credits			

**Application and Qualification :**

- Hold a B.Sc. or equivalent fields and must have taken at least 2 of the following courses: Chemistry and Analytical Chemistry, Biology, Industrial Hygiene, Occupational Health and Safety, Environmental Health, Toxicology and Statistics.
- Have a minimum grade point average of 2.75



- Have a proven minimum of two years professional experience in Occupational Health and Safety or Environmental Health.
- Minimum TOEFL score of 500 (paper-based) or 173 (computer-based) or IELTS not less than 6.0 or TU-GET not less than 500.
- For all non-native speakers, proven English language proficiency is a precondition for program enrolment.

**Document Required:**

- Completed application form
- Copy of degree certificates
- Copy of degree transcripts
- Copy of TUGET or TOEFL or IELTS test score sheet
- Copy of valid passport
- Letter of reference
- Medical certificate
- Concept paper

**Contact:**

Faculty of Public Health, Thammasat University  
Office: 02-564-4440-79 ext. 7426  
Fax: 02-516-2708  
Email: [qip-admissions@fph.tu.ac.th](mailto:qip-admissions@fph.tu.ac.th)  
Website: <http://fph.tu.ac.th/en/master-phd>

**Coordinators**

Ms. Sirada Sahaimitr  
Ms. Prapaporn Pansuwan

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## Course Detail

### Master of Sciences in Public Health Sciences

<b>Course Title:</b>	Master of Sciences in Public Health Sciences
<b>Master Degree:</b>	Master of Sciences (M.Sc. in Public Health Sciences)
<b>Academic Institution:</b>	College of Public Health Sciences, Chulalongkorn University
<b>Duration:</b>	August 2021 – July 2023 (2Years)

#### **Background and Rational:**

Health issues are fundamental to quality of life. That links to other matters of the people and society This world society and the future is a knowledge-based society. (Knowledge-based Society) Society is therefore very demanding of knowledge. To come and deal with the problem Social needs It is an incentive for senior academics in health to drive Always keen to invent new knowledge The Public Health Science Program aims to produce international scholars with the potential to independently acquire knowledge through scientific research methods. To develop the body of knowledge in the field of public health science, Especially in the field of herbal science and biomolecular technology in key national and regional issues. The curriculum is of great interest and in high demand by relevant scholars nationally, regionally and internationally By offering specialties in Public Health Sciences the Semester-based program provides a variety of types and duration of study to respond to students' needs as follow:

#### **Herbal Sciences (plants, animals or minerals)**

Extraction, isolation or purification of natural products from medicinal plants or some microorganisms. Chemistry of essential oils and their therapeutic effects.  
Standardization of herbal drugs. Biological activities and underlying mechanisms of medicinal plants. Development of natural product-based medicines

#### **Biomolecular technology**

- In vitro cultivation and drug susceptibility test of malaria parasites.
- DNA analysis and gene mutations by using molecular techniques
- Gene diversity

#### **Protein modifications**

- Developing new bioconjugation techniques based on organic chemistry.
- Using some modified biomolecules for in vitro or in vivo studies.

**Objectives:**

1. To produce competent Master's both academically and research Become scholars and practitioners with the potential to independently pursue knowledge. Able to develop knowledge in the field of public health science Herbal Science Or the field of molecular technology

2. To develop research in public health science Herbal Science Or the field of molecular technology That can be applied to be applied to solve public health problems at the national, regional and international levels.

3. To develop academic studies in public health science, herbal science and biomolecular technology.

**Course Synopsis and Methodology:****Curriculum Plan**

Course	Plan A2 (Credits)
Core Courses of public health	10
Major Compulsory Courses	3
Elective Courses	11
Thesis	12
<b>Total (Credits)</b>	<b>36</b>

**Study plan**

1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester	3 <sup>rd</sup> Semester	4 <sup>th</sup> Semester
Aug – Dec 2021	Jan – Jun 2022	Aug – Dec 2022	Jan – Jun 2023
<u>Core courses</u> <b>Seminar in Public Health Sciences I (C-1)</b> ❖ Analytical Technology in Public Health Sciences (C-3) ❖ Research Fundamental in Public Health Sciences (C -3)	<u>Core courses</u> ❖ Seminar in Public Health Sciences II (C-1) <u>Elective courses</u> ❖ Special Problems in Public Health Sciences II (E -2 ) ❖ Elective (E- 6)	❖ <b>Thesis /Lab research</b> ❖ Proposal Exam ❖ <b>Academic conference presentation</b> ❖ <b>Article publication</b>	❖ Thesis Exam
<u>Elective courses</u> ❖ Special Problems in	<b>Specific courses due to area of interest (selected)</b>		

<b>Public Health Sciences I (E – 2)</b>	❖ <b>Application of Medicinal Plant Research II</b>		
❖ <b>Elective (E- 6) Specific courses due to area of interest (selected)</b> ❖ <b>Application of Medicinal Plant Research I</b> ❖ <b>Applied Molecular Biology Techniques in Public Health Sciences</b>	❖ <b>Traditional Medicine in Health Sciences I</b> ❖ <b>Current Research Topics in Biomolecular Technology</b>		

### Thesis Research Plan

- Summited Proposal Request within May
- Proposal Exam within June
- Laboratory During July to February
- Interplead Data within April
- Thesis Exam within May
- Summited full paper within July

### Course Content

Code	Course	Credit
5300709	Special Problems in Public Health Sciences I SP PROB PBHLTH I Preliminary research project assigned by the advisor leading to the thesis.	2 (1-3-4)
5300710**	Special Problems in Public Health Sciences II SP PROB PBHLTH II Preliminary research project assigned by the advisor leading to the thesis.	2 (1-3-4)
5300711**	Seminar in Public Health Sciences I SEM PBHLTH I Literature review; information gathering; scientific reading skill; scientific presentation skill.	1 (1-0-3)

5300712	Seminar in Public Health Sciences II SEM PBHLTH II Systematically reading and evaluating scientific papers; scientific presentation and discussion skill.	1 (1-0-3)
5300727	Standardization of Medicinal Plants STD MED PL Principles of qualitative and quantitative standardization of medicinal plants including macroscopic and microscopic analyses of crude drugs, physicochemical properties.	2 (2-0-6)
5300750	Biomolecular Technology in Malaria BIOMOL TECH MAL Cellular and particle structures and functions of cells, basic knowledge of their genetic materials, genes and gene regulation, the way to collect these samples and their cultivation, basic molecular biology techniques which may be used to study living organisms, using malaria as a case study, ethical issues.	3 (3-0-9)
5300751	Application of Medicinal Plant Research I APP MED PL RES I Principles and system of classification, nomenclature and identification of medicinal plants from the morphology, habitat, phylogeny, microscopic structure, chemical composition and biological activity, principles of molecular genetics and application of the concepts and scientific methods in medicinal plant research.	3 (2-3-7)
5300752	Application of Medicinal Plant Research II APP MED PL RES II Preclinical research methodology, clinical trial and socio-medical sciences in Thai traditional medicine, genomic, proteomic and metabolomic application in medicinal plants research.	3 (2-3-7)
5300753	DNA-Based Technology in Medicinal Plant Research DNA MED PL RES Principle and concept in molecular genetics, structures, functions and properties of genes in the molecular level, DNA recombination and the application of DNA-based technology, the use of bioinformatics for searching and analyzing information from the bio-information database from medicinal plant and herb researches.	3 (2-3-7)

5300754**	Analytical Technology in Public Health Sciences Research ANAL TECH PBHLTH Fundamental and advance laboratory techniques for biological, physiochemical and molecular analysis, knowledge and practical skills experience relevant to research in Public Health Sciences.	3 (2-3-7)
5300755	Applied Molecular Biology Techniques in Public Health Sciences APP MOL PBHLTH Principle of the selected basic molecular biology techniques, practice in laboratory and its application to public health sciences research.	3 (2-3-7)
5300756	Current Research Topics in Biomolecular Technology CURR RES BIOMOL Modern molecular technologies; analyzing, presenting and commenting articles from high quality journals.	3 (2-3-7)
5300757**	Research Fundamental in Public Health Sciences RES FUND PBHLTH Preclinical research methods, clinical research methods, animal models, ethical consideration.	3 (2-3-7)
5300758	Traditional Medicine in Health Sciences I TRAD MED HLTH SC I Medicinal properties in traditional medicine, in vitro scientific biological activities, application in health sciences	3 (2-3-7)
5300759	Traditional Medicine in Health Sciences II TRAD MED HLTH SC II Medicinal properties in traditional medicine, in vivo scientific biological activities, clinical research, application in health sciences	3 (2-3-7)
5300811	THESIS	12 credits

**Graduation Conditions:**

- Pass Standard of English (CUTEP 45 / IELTS 4.5 / TOEFL 450)
- Pass Proposal & Thesis Examination
- 1 international Publication or Proceeding
- Submitted Full paper & CU I Thesis to Graduate School
- Completed Register of Graduation

**Applicant Qualifications:**

An interested person with good command of English and bachelor degree in Related fields

**Document Required:**

**- Application form of TICA**

<http://tica.thaigov.net/main/en/relation/75500-TIPP-Application-form.html>

- Transcript

- Recommendation Letter

- English Test

- **CU-TEP 45**

- **IELTS 4.5**

- **TOEFL 450**

- **Certify document Graduated from University where certify by OCSC  
or Study in English Official Language Country**

**- Application form of Chula**

<http://www.cphs.chula.ac.th/index.php/component/phocadownload/file/298-application-form>

- **Statement of purpose and area(s) of interest (1 page)**

- **A copy of your identification document (Passport).**

**Contact:**

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## Course Detail

### Master of Science Program in Epidemiology (International Program)

<b>Course Title:</b>	Master of Science Program in Epidemiology (International Program)
<b>Master Degree:</b>	Master of Science (Epidemiology)
<b>Academic Institution:</b>	Epidemiology Unit, Faculty of Medicine, Prince of Songkla University (Designated as WHO Collaborating Centre for Research and Training on Epidemiology)
<b>Duration:</b>	2 years

#### Background and Rationale:

Epidemiology is defined as “the study of the distribution and determinants of health-related states or events (including disease), and the application of this study to the control of diseases and other health problems”. Knowledge of epidemiology can be integrated into various kinds of research, such as medical or clinical, public health, social health, education or health economics, which can be applied with global health, clinical medicine, genetic epidemiology, health sciences or zoonosis. Therefore, this epidemiology program is useful for diverse health professionals and researchers who aim to systematically develop the research that fully impacts on health.

The epidemiology program has been organized around research-based knowledge and skills incorporating learning and teaching methods that integrate both theory and practice. This experience will help the students to achieve high levels of expertise as well-trained researchers who can conduct research of international standard that has a beneficial impact on public and global health. Strong point of the program is emphasized on the field work and training in research methodology and use of open source software for analysis of research data. This program is the first in the country to develop a package designed specifically to meet the need for epidemiological data. The program also provides the training in-class and online in the use of an epidemiological statistics package in open source software. To date, training has been provided numerous countries principally in Asia and Africa. The teaching staff of the program have extensive experience in different continents and are well recognized by the international research community. The staff also have extensive experiences of teaching, supervising and taking care of students from diverse cultural and educational background including both medical, public health and social science disciplines. To these activities, the program has a significant impact on development of human resources for health research both nationally and internationally. So far, 85 M.Sc. students have



graduated from the program. They were accepted from their work places and have become leaders in research and academic activities in their country.

### **Objectives:**

1. To conduct morally and ethically sound research.
2. To design studies in response to the needs of stakeholders.
3. To search information using skills in information technology.
4. To integrate theoretical health concepts in order to solve health problems systematically through critical appraisal of the evidence.
5. To conduct community-based, community-oriented, community-participating field research.
6. To appropriately interpret the analytical outputs, and discuss the findings amidst the evolving state of knowledge.
7. To demonstrate mastery of principles of epidemiology and statistics in relation to health research.
8. To collect and analyze data properly with clear presentation in academic fashion.
9. To produce research by integration of multiple disciplines, and interpret and apply the results in a stakeholder-friendly manner, leading to solutions for the organization or the community, and publish the findings as a research article.

### **Course Synopsis & Methodology:**

This is a sandwich-type international program. In the first-year students will attend classes at Prince of Songkla University in which all students will gain knowledge and skills in epidemiology, statistics, research methodology, database management, critical appraisal of research studies, qualitative research and field work. In the second year students will concentrate on their thesis which should focus on the importance of health problems in the student's own country using good research methodology which the students will go back to home country to collect the data for 6 months and then come back to the Epidemiology Unit for data analysis and preparation of the thesis and manuscripts for publication in international journals for another 6 months. After coursework the students are allowed to go back to their home country for data collection. All students will be trained to improve their skills on computer, database and data management for research development in the future.

#### **1. Study plan**

##### **1<sup>st</sup> Semester / 2021 academic year**

347-551	Medical Statistics and Statistical Computing	4 credits
352-521	Epidemiological Methods I	3 credits
352-522	Appraisal of Articles in Journals*	1 credit
<b>Total</b>		<b>7 credits</b>

\*non-credit subject

**2<sup>nd</sup> Semester / 2021 academic year**

352-524	Seminars in Research Methodology	3 credits
352-525	Epidemiological Methods II	3 credits
352-526	Advance Medical Statistics and Medical Data Analysis	3 credits
352-527	Field Work Research	2 credits
<b>Total</b>		<b>11 credits</b>

**1<sup>st</sup> Semester / 2022 academic year**

352-529 Thesis 9 credits

**2<sup>nd</sup> Semester / 2022 academic year**

352-529 Thesis 9 credits

**Grand Total 36 credits**

No.	Progress	Timeline
1	Coursework	June 2021-March 2022
2	Progress of proposal development	February – March 2022
3	Proposal examination	April-June 2022
4	Data collection	July-October 2022
5	Data analysis and manuscript & thesis preparation	October –April 2023
6	Thesis examination	May-June 2023

**Note: Length of time for the study can vary, depending on speed of each student.**

**2. Course Content/ Study Topic:****1. Core courses*****Medical Statistics and Statistical Computing***

Descriptive statistics, probability theory; binomial distribution, poisson distribution, normal distribution, sampling distribution, estimations and hypothesis testing, one way analysis of variance, categorical data analysis using chi-square distribution, correlation and simple linear regression analysis, multiple linear regression analysis, nonparametric statistics, computer software application

***Epidemiological Methods I***

Scientific reasoning, health indicators, health program priority setting, measures of risk, causation, confounding and interaction, bias, sampling techniques, measurement and data collection, research and development in health, burden of disease.

***Appraisal of Articles in Journals***

Reading and criticism of an original article in an international journal interpretation of results, critique, implications in public health and clinical practice.

***Seminar in Research Methodology***

Introduction to research methodology, rationale for research, formulation of research objectives and hypothesis, research strategy, sampling and population, measurement, data collection and analysis, preparation of research proposal.

***Epidemiological Methods II***

Introduction to study design, descriptive study, cross-sectional study, case control study, cohort study, clinical trial, community experimental, validity and reliability, systematic review of RCT, screening, diagnostic test, research ethics.

***Advanced Medical Statistics and Medical Data Analysis***

Analysis of 2x2 tables, analysis of confounding and interaction, binary logistic regression, Poisson regression, multinomial and proportional odds logistic regression, survival analysis, sample size and strategies for modeling epidemiological data, big medical data, data mining.

***Field Work Research***

Identification of priority and topic of fieldwork by discussion with the local public health workforces, design and preparation of the proposal, data collection and analysis, presentation to decision makers and relevant parties.

***2. Thesis***

A Master thesis is the beginning of professionalization for an epidemiological research career. The proposal will be prepared and refined in parallel with the progress of the coursework through group discussion before submission for approval by the Committee for Graduate Study of the University by the end of the first year. Data collection will be undertaken for a period of six months in the student's regular place of work. Final analysis and preparation of the thesis will occupy the final 6 months in PSU to ensure quality of work and success.

Research study should be within the field of epidemiology under supervision of a faculty advisory team.

**Graduation Conditions:** To fulfill the requirements, the student must follow the requirements of each graduate program.

**Applicants Qualifications:**

1. Direct collaboration between our institute and the institute of the applicant.
2. Research funding from the applicant's organization or a funding agency in the applicant's country which will provide administrative support for the data collection phase during the second year of study.
3. Previous work experience related to health.
4. Healthy and active.
5. Good command of English.
6. Age not more than 40 years (preferable).
7. Having publication in a peer review journal in local or international paper.

**Document Required:**

- Application form
- A medical examination report which includes results of chest x-ray, complete blood count, urinalysis and HIV test.
- An official transcript from all institutions of higher learning attended.
- Curriculum vitae, including a list of publications if available.
- An official report of the result of the English language proficiency examination (TOFEL 500, IETLS 5.0, CU-TEP $\geq$ 60, PSU-TEP $\geq$ 60).
- Recommendation letter from the workplace.
- First page of all published articles ( If any)
- Research description/plan
- A copy of Passport
- Statement of purpose (approximately 500-800 words)

Closing date for Nominations: Academic year 2021: 22 February 2021

\*Note: Late or incomplete applications/documents may be considered only under special circumstances but must not arrive later than 22 March of each year.

**Contact:**

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### **Course Detail**

#### **Master of Science Program in Innovative and Tropical Health (International Program)**

<b>Course Title:</b>	Master of Science Program in Innovative and Tropical Health (International Program)
<b>Master Degree:</b>	Master of Science Program in Innovative and Tropical Health
<b>Academic Institution:</b>	Graduate School, Faculty of Medicine, Faculty of Engineering, and Faculty of Technology Mahasarakham University
<b>Duration:</b>	June 2021 – May 2023

#### **Background and Rational:**

According to the 12<sup>th</sup> National Economic and Social Development Plan (2017-2021), dramatic social and economic changes in South-east Asian Region and worldwide are witnessed. These changes coupled with having national development policy toward moving to Thailand 4.0, being one out of ten nations in the ASEAN community since 2015, and incorporating the Sustainable Development Goals (2016-2030) of the United Nations, emphasizing, in particular, no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable clean energy, and other related ten goals, have made Thai people, groups, institutes, and organizations to prepare and to be ready for all changes and newly development goals for competitive advantage on the world stage.

Current globalization leads to social and cultural change dramatically. Thailand becomes multicultural setting and these changing conditions influence on shifted health culture of the country. These changes coupled with incorporation national health policies with the policies of the World Health Organization-WHO, Thailand has launched six strategic plans since 2016, including strengthening road safety, multisectoral network for non-communicable diseases, international trade and health, disaster preparedness and response, ageing program, and migrant health program. Preparation of highly qualified health science personnel with eligible knowledge and skills in development of health and quality of life of a population in ever changing socio cultural context are needed. Consequently, quality health scientists could contribute to a better translational nation with sustainable development.

#### **Objectives:**

- Having moral and ethical to constantly put their best efforts for the benefits of society and country.
- Having knowledge, ability and skill in innovation and tropical health theoretically and practically, being able to conduct research studies and utilize new and useful knowledge in tropical health at an international level, as well as being able to creatively construct and look for new knowledge.
- Having ability to analyze data critically and constructively, being able to create valuable research in tropical health, develop innovation, manage and utilize technology, as well as corporate networking to help solving solutions and alleviation of health problems of the population and health care system development to promote people's health and quality of life and to facilitate socio and economic growth nationally and internationally in a sufficient and sustainable way.
- Having human relationship skill, being able to work harmonize with other people, and having responsibility for assigned works.
- Having ability and skill in numeral analysis, systematically help solve problems, communication and information technology.

**Course Synopsis and Methodology:****Study plan**

System: Following the regulations of Mahasarakham University regarding Graduate Education 2017 Group 2 Article 12 (more detail in appendix), this curriculum uses a semester system. Each academic year will be separated into two semesters which are primary semester and final semester with at least 15 weeks per semester.

Thesis/Independent Study

**Course Content****Bioinformatics****Innovative in Health Science****Integrative and modern Public Health****Biostatistics for integration****Global health****Nutrition and Health****Emerging medicine, Tropical Medicine****Travel medicine, Disaster medicine****Integrative Parasitology****Translational medicine****Health informatics****Health geographic information system)****Graduation Conditions:**

- Passed at least one language test result according to MSU regulations and conditions
- Passed “Qualifying Examination” for thesis based program
- Finalized thesis proposal submission, pass final oral examination which includes specialist committee with both internal and external MSU members
- Thesis result must be published or accepted for publication in any qualified national or international journal listed in database such as TCI, ISI, Scopus, PubMed or Web of Science with at least one article or proceeding of International conference indicating student as the first author to meet the university criteria

**Applicant Qualifications**

- Applicants who graduated with a Bachelor degree in health science or have related fields such as public health, nursing, pharmacy, associated medical sciences from an education institution approved by the (MUA) or having research experience.
- Applicants must succeed first class honor or a GPA of at least 3.25.
- Applicants must have at least one research articles published in the national or international database peer-reviewed journal after bachelor degree graduation.
- Applicants must submit research proposal which is consistent of objective of their major and accepted by the Curriculum Administrative Committee or Proposal Committee of the Faculty.
- Applicants must fulfil qualification according to the regulations of the University regarding Graduate Education 2014
- Applicants who do not meet items (1)-(3) requirement may be admitted to the program according curriculum to the Administrative Committee’s decision and approval.

- Applicants must have good English skill, be able to communicate, and have a good score from a Standard English Test, for example obtaining TOEFL score of at least 500 or IELTS of at least 5.0 or pass an English Test as approved by the Faculty Graduate Study Committee.

- Entrance by written and/or oral examinations are organized by the Curriculum Administrative Committee. The other conditions are in accordance with the regulations of the University regarding to Graduate Education 2014.

**Document Required**

- TIPP Application Form: <http://tica.thaigov.net/main/en/relation/75500-TIPP-Application-form.html>

- Medical Report
- Transcript
- Recommendation Letter
- English Test

**Contact:**

**Assistant Professor Dr. Choosak Nithikathkul**  
**[Nithikethkul2016@gmail.com](mailto:Nithikethkul2016@gmail.com) 0814038562**

**For more information:**

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## Course Detail

### Master of Arts Program in Asia Pacific Studies (International Program)

<b>Course Title:</b>	Master of Arts Program in Asia Pacific Studies (International Program)
<b>Master Degree:</b>	Master of Arts (Asia Pacific Studies)
<b>Academic Institution:</b>	Thammasat Institute of Area Studies (TIARA), Thammasat University
<b>Duration:</b>	18 months (August 2021 - January 2023) 3 semesters + 1 summer semester

#### Background and Rational:

Master of Arts in Asia-Pacific Studies (MAPS) Program is an interdisciplinary graduate program that is designed for internationally – focused students who wish to obtain an in-depth understanding of the Asia-Pacific region through multi-faceted and inter-disciplinary lenses.

MAPS is the first graduate program in Thailand which examines the entire Asia-Pacific region in all its complexities. The Asia-Pacific region is one of the most dynamic and diverse regions in the world. It is the home of more than 4.3 billion people and accounts for more than half of global economic activities. Trade and development have given rise to international economic cooperation, ranging from small regional forums to large-scale collaborations such as APEC (Asia-Pacific Economic Cooperation) and ASEAN.

MAPS program provides students with the opportunity to deepen their knowledge not only on the said academic disciplines. Students will also study various contemporary issues related to sustainable development in the region. The program adopts multidisciplinary approach that allows them to integrate study of economics, law, international relations, and public policies to give students an understanding of contemporary regional issues. These issues are directly related to the following **Sustainable Development Goals**: Goal 2 (Zero hunger), Goal 4 (Quality education), Goal 5 (Gender equality), Goal 8 (Decent work and economic growth), Goal 9 (Industry, innovation and infrastructure), Goal 10 (Reduced inequalities) and Goal 13 (Climate change).

The Asia-Pacific region is also the home of 700 million youth whose ambitions and abilities can contribute to the prosperous, peaceful, and sustainable future of the region. Investing in youth is an investment for the future. Our students will be trained and empowered for a sustainable future that requires a better understanding of their needs, interests, challenges, and potential may it be domestically or internationally.

MAPS is a truly international program with more than 80 per cent of international students. Students at MAPS program come from ASEAN member states and countries in the Asia-Pacific such as Bhutan, Japan, and China. The majority of them works in public and higher education sectors, that is, civil service officers at Ministry of Foreign Affairs and university lecturers. When they graduate, they will go back and become the driving force for sustainable developments in their counties.

Followings are examples of the Thesis studies by MAPS graduates. These theses are related to SDGs Goal.

- **Goal 2—Zero hunger:** End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
  - The Evaluation of Japanese ODA to Vietnamese Farmers
  - Effects of Agricultural Policies on Rice Industry in Myanmar

- **Goal 4—Quality education:** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
  - Education Reform in Myanmar: A Case of Two Technological Universities
- **Goal 5—Gender equality:** Achieve gender equality and empower all women and girls.
  - Study on the Role of Entrepreneurship in the Textile Sector Industry in Bhutan
  - Women and Career Advancement in Brunei Darussalam: A Case Study of Women Working in Brunei Darussalam Government Sectors
- **Goal 8—Decent work and economic growth:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
  - Community- based Tourism in Creating Impacts for Rural Communities: A Case Studies Nglanggeran Tourist Village in Yogyakarta, Indonesia
  - Challenges Faced by Brunei’s Micro and Small Entrepreneurs on the Utilization of Social Media as Online Marketing
  - The Effect of the Royal Decree on Managing the Work of Aliens B.E. 2560 (2017) on Myanmar Migrant Workers in Factories: Case Study of Four Selected Companies in Samut Sakhon Province
  - Factors Affecting Foreign Direct Investment (FDI Inflows to Lao PDR
  - Factors Attracting Investors to Invest in Laos: Case Study of Savan Seno Special Economic Zone
  - Corporate Social Responsibility in Vietnam State-owned Enterprises: A Comparative Analysis of PVEP and VTC
  - The Influence of Government Policy on the Return of Overseas Vietnamese in the Information and Communication Technology Sector
- **Goal 9—Industry, innovation and infrastructure:** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
  - Determinant Factors of Tuna Canneries Performance in Indonesia and Thailand: A Comparative Perspective
  - Analysis of the Effect of the Trans-Pacific Partnership Free Trade Agreement on the Vietnamese Apparel Industry
- **Goal 10—Reduced inequalities:** Reduce inequality in and among countries.
  - Refugee Status Determination (RSD) Practices in Thailand
  - Inequality and Economic Development in Lao PDR since the 1986 Economic Reform
- **Goal 13—Climate change:** Take urgent action to combat climate change and its impacts.
  - Disaster Management in Cambodia: Community- based Disaster Risk Management in the Case of Drought in Oral District

MAPS program allows the exchange of first-hand knowledge and experiences from international students particularly from APEC and ASEAN member countries. After graduation, graduates are equipped with knowledge of situations, phenomena, contemporary issues, and sustainable development in the Asia-Pacific region which can be applied to their careers in the public sector, diplomatic service, academic consultancies, international organizations, and sustainable development related career domestically and internationally.

MAPS Program are offered and administered by Thammasat Institute of Area Studies or TIARA at Thammasat University. TIARA starts off from a single center namely Thai APEC Study Center which works to foster research and academic discussions supporting the broader APEC mission of regional economic integration and a means to building networks of academic professionals

in the region. TIARA has developed not only experience, but it also extends in term of networks, collaborations, academic exchanges and many more. At present, TIARA is a home to five Area Studies Centers – Thai APEC Study Center, the Australian Studies Centre, India Studies Center, Russia and CIS Study Center, and the ASEAN Study Center. These centers have their own academic focuses and networks. This gives TIARA more resources and room to do academic activities within the context of ‘Area Studies’ and not limited to country or regional studies. For that reasons, TIARA becomes the institution with expertise in conducting academic and policy research, organizing seminars, trainings, workshops, and international conferences on issues in the Asia-Pacific region. Our knowledge and expertise have been continuously building up since the year 2000.

With its networks in Thailand and around the world, TIARA utilizes all resources and networks to benefit MAPS program. The program regularly welcomes visiting professors and guest lecturers as well as experts in the field to teach our students especially those institutes that signed MOUs with TIARA. These become a unique characteristic and strong point of the program in terms of teaching and research making MAPS a quality program that produce international standard quality graduates to fulfill MAPS’s mission and vision, that is, to provide high quality graduate education, academic resources, training and professional developments as well as foster cultural learning and exchanging opportunities for graduate students and professional in the intellectual diverse environment.

The MAPS curriculum emphasizes interdisciplinary studies from professors, scholars, and professionals with high expertise in their fields. Students will learn to look deeper into topics from all aspects and perspectives, foster critical thinking and analytical ideas including to tackle topics from new directions, which will transform into a lifelong learning. Please see an attachment named List of MAPS Guest Lecturers for your reference.

In addition to our human resources, MAPS had its own facilities. MAPS students are given the access to a dedicated research and study space to help fostering intellectual exchange and collaboration beyond the classroom.

1. Asia-Pacific Resource Center – the Resource Center, as our students called it, houses a relevant and accessible collection of Asia-Pacific related resource materials. The center provides space for information and cultural exhibition as well as acquired information and dissemination manuals, information and research about countries in the Asia-Pacific region. The center also provides modern, adequate, and efficient information center services, appropriate and comfortable learning environment on the use of resources for individual and group study for individual and group study.

2. MAPS Common Room – MAPS Common Room located at the 1<sup>st</sup> Floor of the Social Science Complex next to the Asia-Pacific Resource Center, is designed specially for MAPS students. It is primary space for students to hang out – whether for work on project or to spend time with each other. The MAPS Common Room is created with comfortable and welcoming environment features wireless internet access and lockers for student use. MAPS Common Room is divided into three Zones with different functions; 1 small classroom seated classroom style with the capacity of 40 people, 2 rooms with flexible furniture configuration with capacity for 20 people for group gathering or informal group meeting.

3. MAPS Classroom – a small fully equipped classroom with capacity for 20-25 students

4. MAPS co-working space – located in front of MAPS Classroom with capacity for 20-25 students

For more information about MAPS Program, course syllabus, and other related matters, please see an attachment named Introduction to MAPS Program \

Previous record of the graduation of students under MAPS Program are shown in the Table below.

Academic Year	Total number of Students	Total number of Students who graduated	%
2015	13	12	93
2016	17	13	77
2017	12	11	92

### Objectives:

Master of Arts in Asia- Pacific Program aims to prepare students for future challenges in sustainable manners and integrate knowledge of international economics, international relations, and international laws to the sustainable development as well as to promote sustainability mindset and encourage students and graduates to play their roles in fulfilling UN' SDG Goals, may it be in the domestic or international arena.

### Course Synopsis and Methodology:

#### Program Information

Program Length	18 months full-time/ 3 full semesters and 1 summer semester
Medium of Instruction	English Language
Class Size	20
Campus	Most courses are taught at Rangsit Center
Facilities	Asia-Pacific Resource Center and MAPS Common Room. Students will be given the access to dedicated research and study space to help foster intellectual exchange and collaboration beyond the classroom

#### Program Plan

Plan A	Credit	Plan B	Credit
Required courses	21	Required courses	21
Elective Courses	6	Elective Courses	12
Thesis	12	Independent Studies	6
Thesis Defense	-	Written Comprehensive Exam	-
Postgraduate International Conference (TU-CAPS)	-	Postgraduate International Conference (TU-CAPS)	-
<b>Total</b>	<b>39</b>	<b>Total</b>	<b>39</b>

#### Plan A

#### Semester 1 Year 1: 4 Subjects 12 credits

APS600	Foundation Asia-Pacific Studies	3 credits
APS612	Economic Development in ASEAN	3 credits
APS621	Political, Security, and Defense Strategies in the Asia-Pacific Region	3 credits

APS6xx	Elective Course: between Comparative Politics and Governments in the Asia-Pacific Region/ International Relations and Foreign Policy in the Asia-Pacific Region	3 credits
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**Semester 2 Year 1: 4 Subjects 12 credits**

APS611	Economic Integration in the Asia-Pacific Region	3 credits
APS631	International Law and Regional Architecture in the Asia-Pacific Region	3 credits
APS681	Research Methodology	3 credits
APS6xx	Elective Core Course: choose between Contemporary Issues in the Asia-Pacific Studies/ Public Policy Studies	3 credits

**Summer Semester: 1 Subject 3 credits**

APS800	Thesis	3 credits
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**Semester 1 Year 2: 2 Subjects 12 credits**

APS6xx	Elective Course: between Comparative Politics and Governments in the Asia-Pacific Region/ International Relations and Foreign Policy in the Asia-Pacific Region	3 credits
APS800	Thesis	9 credits

**Plan B****Semester 1 Year 1: 4 Subjects 12 credits**

APS600	Foundation Asia-Pacific Studies	3 credits
APS612	Economic Development in ASEAN	3 credits
APS621	Political, Security, and Defense Strategies in the Asia-Pacific Region	3 credits
APS6xx	Elective Course: between Comparative Politics and Governments in the Asia-Pacific Region/ International Relations and Foreign Policy in the Asia-Pacific Region	3 credits

**Semester 2 Year 1: 4 Subjects 12 credits**

APS611	Economic Integration in the Asia-Pacific Region	3 credits
APS631	International Law and Regional Architecture in the Asia-Pacific Region	3 credits
APS681	Research Methodology	3 credits
APS6xx	Elective Core Course: choose between Contemporary Issues in the Asia-Pacific Studies/ Public Policy Studies	3 credits

**Summer Semester: 1 Subjects 3 credits**

APS6xx	Elective Course: Selected Topics in Asia-Pacific Studies (Countries Studies)	3 credits
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**Semester 1 Year 2: 2 Subjects 6 credits**

APS6xx	Elective Course: between Comparative Politics and Governments in the Asia-Pacific Region/ International Relations and Foreign Policy in the Asia-Pacific Region	3 credits
APS6xx	Elective Course:	3 credits

**Semester 2 Year 2: 1 Subject 6 credits**

APS6xx	Independent Studies	6 credits
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**Applicants Qualifications:**

- A bachelor's degree in any field with a cumulative GPA of 2.5 and above from an accredited university. For those who wish to apply for a scholarship, applicants should at least have a cumulative GPA of 3.00 with an above average grade on the relevant subjects.
- Requirement for English Proficiency

No.	English requirements	Minimum score
1	Paper based TOEFL	550
2	Computer-based TOEFL	213
3	Internet-based TOEFL	79
4	International English language Testing System (IELTS)	6.5
5	Thammasat University Graduate English Test (TU-GET)	550
6	Thammasat University Graduate English Test (TU-GET) CBT	550

- Applicants can be accepted with conditions in the case of
  - IELTS:  $6.5 \geq 5.0$
  - TOEFL:  $550 \geq 400$
  - TU-GETS:  $550 \geq 350$
- Applicants who cannot meet the minimum score of the above can reply to the program and submit the required score to the university before the registration day. English test results must not exceed 2 years by the time the applicants submit the results to the university.
- Test results submitted with the admission application are valid evidence for graduation.
- Please note that Thammasat University requires all students who have not submitted their English Proficiency Test Score to meet the minimum requirement score to submit their Official English Proficiency Test score before the final Thesis defense
- 4<sup>th</sup> year bachelor students who expect to graduate may apply by submitting a certified letter of expected date of graduation.
- Complete applications and submitting all required documents.
- As one of graduate requirement from Thammasat University, graduate students are required to present their thesis work at the International Conference. MAPS students are entitled to present their works at TU-CAPS, the annual international conference hosted by Thammasat Institute of Area Studies, Thammasat University.

**Document Required:**

- Completed Online Application Form (at [www.maps-tu.org](http://www.maps-tu.org))
- Official Academic Transcript (English version only)
- Statement of Purpose (as appear in Online Application Form)
- Proof of English Language Proficiency (IELTS, TOEFL, TU-GETS)
- Two letters of Reference
- Copy of Passport
- ID Photo (Passport size)
- Other additional supporting documents an applicant may want to submit such as certificates of training, letter of employment, etc.

**Contact:**

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Email: [suphat@econ.tu.ac.th](mailto:suphat@econ.tu.ac.th)

**Programme Coordinator:**

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MAPS Program Coordinator  
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## **Course Detail**

### **Master of Arts Program in Diplomacy and International Studies (International Program)**

<b>Course Title:</b>	Master of Arts Program in Diplomacy and International Studies (International Program)
<b>Master Degree:</b>	Master of Arts (Diplomacy and International Studies)
<b>Academic Institution:</b>	The Institute of Diplomacy and International Studies (IDIS), school of Politics, Economics, and Globalization, Rangsit University
<b>Duration:</b>	2 Years (August 2021 – July 2023)

#### **Background and Rational**

IDIS was established on 22 of March, 2006, with an aim to meet the challenge of globalization and the increasing demand for world-class professionals in International affairs in Thailand and the Asian region.

DIS with its multi-disciplinary approach, became the first institute of its kind in Southeast Asia. The establishment of DIS is an important step in the implementation of Rangsit University's Road Map to excellence strategy, which created qualified graduates for the region and the world at large.

#### **Objective:**

Many career opportunities are open to IDIS graduates, especially in Southeast Asia and broader Asia where there is significant demand for graduates knowledgeable in politics, international relations and development studies. Opportunities include positions in government ministries, international organizations, non-governmental organizations, think tanks, the media, international businesses and educational institutions. To increase their opportunities many of our undergraduate students progress to postgraduate study at IDIS or at other universities across the globe.

**Course Synopsis and Methodology:**

Master of Arts Program in Diplomacy and International Studies (International Program)

**1<sup>st</sup> Year**

<b>PLAN A</b> <b>(Academic subjects, and Thesis)</b>	<b>PIAN B</b> <b>(Academic subjects, and Interdepend Studies)</b>
<p><b>Semister 1</b></p> <p>IDS 603 International Politics and Security 3(3-0-6)</p> <p>IDS 604 International Law and International 3(3-0-6)</p> <p>IDS 605 International Economics and 3(3-0-6) International Business</p> <p style="text-align: right;">Total 9 credits</p>	<p><b>Semister 1</b></p> <p>IDS 603 International Politics and Security 3(3-0-6)</p> <p>IDS 604 International Law and International 3(3-0-6)</p> <p>IDS 605 International Economics and 3(3-0-6) International Business</p> <p style="text-align: right;">Total 9 credits</p>
<p><b>Semister 2</b></p> <p>IDS 606 Global Perspectives on Public 3(3-0-6) Diplomacy</p> <p>IDS 607 Negotiations and conflict 3(3-0-6) resolution</p> <p>IDS 608 Political Economy of Asia 3(3-0-6)</p> <p style="text-align: right;">Total 9 credits</p>	<p><b>Semister 2</b></p> <p>IDS 606 Global Perspectives on Public 3(3-0-6) Diplomacy</p> <p>IDS 607 Negotiations and conflict 3(3-0-6) resolution</p> <p>IDS 608 Political Economy of Asia 3(3-0-6)</p> <p style="text-align: right;">Total 9 credits</p>

2<sup>nd</sup> Year

<p style="text-align: center;"><b>PLAN A</b> (Academic subjects, and Thesis)</p>	<p style="text-align: center;"><b>PIAN B</b> (Academic subjects, and Interdepend Studies)</p>
<p><b>Semister 1</b></p> <p>IDS 609 ASEAN Integration 3(3-0-6)</p> <p>IDS 661 Research Methodology 3(3-0-6)</p> <p>IDS 699 Thesis 3(0-6-3)</p> <p style="text-align: right;">Total 9 credits</p>	<p><b>Semister 1</b></p> <p>IDS 609 ASEAN Integration 3(3-0-6)</p> <p>IDS 661 Research Methodology 3(3-0-6)</p> <p>IDS xxx Elective 3(x-x-x)</p> <p style="text-align: right;">Total 9 credits</p>
<p><b>Semister 2</b></p> <p>IDS 699 Thesis 9(0-18-9)</p> <p style="text-align: right;">Total 9 credits</p> <p style="text-align: center;"><b>Total 36 Credits</b></p>	<p><b>Semister 2</b></p> <p>IDS xxx Elective 3(x-x-x)</p> <p>IDS xxx Elective 3(x-x-x)</p> <p>IDS 697 Comprehensive Examination 0(0-0-0)</p> <p>IDS 698 Independent Studies 3(x-x-x)</p> <p style="text-align: right;">Total 9 credits</p> <p style="text-align: center;"><b>Total 36 Credits</b></p>

### **Applicants Qualifications**

The program is open to students with or without prior knowledge of politics and international studies who wish to increase their understanding of globalization and current events in international affairs. Students will gain a comprehensive understanding of various aspects of diplomacy and international relations, and also have the option to write a thesis/ an Independent Study in their chosen area of research.

### **Document Required**

Identification Card	House Registration
Passport (for foreign)	4 Photographs (1 Inch size)
Certificates Degrees	Transcripts
English Language Requirement (TOEIC score minimum 640, IELTS score minimum 5.5)	

### **Contacts:**

- The Institute of Diplomacy and International Studies, Rangsit University 52/347  
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## Course Detail

### Master of Arts Program in International Development

<b>Course Title:</b>	Master of Arts Program in International Development
<b>Master Degree:</b>	Master of Arts Program in International Development M.A. (International Development)
<b>Academic Institution:</b>	School of Social Innovation, Mae Fah Luang University
<b>Duration:</b>	Two (2) academic years (August 2021 – May 2023)

#### **Background and Rationale:**

The Master of Arts Program in International Development is an English program aimed to strengthen students who seek for knowledge and skills in International Development. The curriculum is designed to be interdisciplinary and cover several aspects of international development practice including theoretical, debates, project planning and management. In terms of issues based on the location of the university as well as the expertise of lecturers, borderland, transboundary and transnational issues with receive high attention.

In response to the changing global-regional landscape and development in social, political, economic, and environment that has become more integrated with highly mobility of people and resources in the globalization era. This program is an interdisciplinary program that will provide comprehensive and intensive knowledge from both theoretical and practical perspectives through various academic disciplines.

The core of this program covers various academic areas; people-centered development, development cooperation, peace and conflict management, disaster, resources management, as well as human security in various categories including food security, sustainable development in the guideline of sufficiency economy and sustainable development goals (SDGs), which are seen as the key for future regional and global development in the 21<sup>st</sup> century.

Therefore, this curriculum will also promote this value through subjects focusing on cooperation and research linking several partners and stakeholders. In addition, sharing the border with less developed countries, this program will also facilitate students from neighboring countries for their capacity building so that the regional disparity will be lessened and cordial relationships will be enhanced.

The structure of the program is divided into 3 parts: required courses, elective courses and thesis. With the emphasis on practical skills, students are required to apply field works as one of the main research methods.

#### **Objectives:**

This program aims to produce graduates with the ability to address global agenda in the area of international development, especially the border issues. The program also aims to

educate the student to have understanding of theories, concepts and practicality of borderlands and management of transboundary issues in the Greater Mekong Sub-region at all levels of analysis (local, national, regional and international contexts).

### Course Synopsis and Methodology:

#### 1. Study Plan

##### Plan A2 (Course works and research)

Year 1					
Semester 1			Semester 2		
2301701	International Development: Rethinking	3	230xxxx	Elective 1	3
2301702	Human Security and Governance	3	230xxxx	Elective 2	3
2301703	Peace and Conflict Studies: Theories and Practices	3	230xxxx	Elective 3	3
2301704	Research Methodology	3	230xxxx	Elective 4	3
Total (credits)		12	Total (credits)		12
Year 2					
Semester 1			Semester 2		
2301791	Thesis	6	2301791	Thesis	6
Total (credits)		6	Total (credits)		6

#### 2. Course Content

##### Plan A (2):

##### 1) Core courses

**12 credits**

2301701	International Development: Rethinking	3(3-0-6)
2301702	Human Security and Governance	3(3-0-6)
2301703	Peace and Conflict Studies: Theories and Practices	3(3-0-6)
2301704	Research Methodology in International Development	3(3-0-6)

##### 2) Elective courses

**12 credits**

2301705	Development Policy: Practice and Advocacy	3(3-0-6)
2301706	Regional Cooperation and Cross-Border Mobility	3(3-0-6)
2301707	International Security in the New Era	3(3-0-6)
2301708	Civil Society and Transboundary Resources Management	3(3-0-6)
2301709	Development Project Management	3(3-0-6)
2301710	Capital Mobilization for Development: Investment, Aid, and Debt Management	3(3-0-6)
2301711	Community Resilience and Inclusive Growth	3(3-0-6)
2301712	Human Rights and Development	3(3-0-6)

2301713	Gender and Development	3(3-0-6)
2301714	Historiography	3(3-0-6)
2301721	Special Topic in International Development	3(3-0-6)

**3) Thesis****12 credits**

2301791	Thesis	12 credits
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**Graduation Conditions:**

- 1) The students must complete all courses required in the curriculum and have a GPAX not lower than 3.00.
- 2) The students have presented their thesis and passed the thesis
- 3) The students have submitted a complete thesis according to the format and number required by the university.
- 4) A thesis paper must be published; or a thesis paper or a part of it is accepted to be published in an academic journal(s); or the paper is presented in an academic conference in which a full thesis paper is published in the proceedings. The regulations regarding publication must in accordance with the program conditions and the university announcement.
- 5) The students who need to complete their degrees must have taken one of the following English Proficiency Tests prior to his/her thesis defense:

Types of Test	Required Scores
TOEFL (Paper based)	437
TOEFL (Computer based)	123
TOEFL (Internet based)	41
TOEFL (Institutional Testing Program) Level 1	500
IELTS (Academic module)	5
TU-GET	450
CU-TEP	45
CMU-eTEGS	60
MFU-TEP	50

\* The English Proficiency Test result should not exceed 2 years since the exam date.

**Applicant Qualifications:**

- 1) All applicants with a bachelor's degree in social science, political science, international relations, sociology, anthropology, history, humanity, and related fields with cumulative undergraduate GPAX not less than 2.50 to join the program.
- 2) All applicants are required one of the following English Proficiency Tests with a minimum score for graduation:

3) Types of Test	Required Scores
TOEFL (Paper based)	437
TOEFL (Computer based)	123
TOEFL (Internet based)	41
TOEFL (Institutional Testing Program) Level 1	500
IELTS (Academic module)	5
TU-GET	450
CU-TEP	45
CMU-eTEGS	60
MFU-TEP	50

\* The English Proficiency Test result should not exceed 2 years since the exam date.

- 4) The program admission committees make all admission considerations on a case-by-case basis.

**Document required:**

- 1) Application affixed with photographs;
- 2) A copy of transcript from attended institutions written in English
- 3) Evidence of English proficiency
- 4) Statement of purpose
- 5) Letters of recommendation from referee
- 6) A copy of passport

**Contacts:**

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 E-mail: tipp@mfa.mail.go.th

\*\*\*The application procedure will complete when TICA has received the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible countries/territories.



## Course Detail

### Master of Arts Program in Social Science (International Program)

<b>Course Title:</b>	Master of Arts Program in Social Science, (International program)
<b>Master Degree:</b>	Master of Arts (Social Science) M.A. Social Science
<b>Academic Institution:</b>	Faculty of Social Sciences, Chiang Mai University
<b>Course Duration:</b>	The period of study for M.A. is <b>to 2</b> academic years
<b>Background and Rational:</b>	

The MA program in Social Science was opened in 2012 based on the Sustainable Development master's program established in 1999. Throughout this time the Faculty of Social Sciences has been continuously working address emerging social issues as they have appeared in regional development. In 2017, the program was further revised to address three levels of development policy; national, regional and international.

**At the National Level:** The master's program curriculum is tailored to dovetail with the 20 year Thailand Strategic plan under the banner of "Enhancing Equal Opportunity in the Nation." We inculcate in our students an integrated approach to social science knowledge and research— to understand poverty by looking from the grassroots, from people who have been impacted by inequality.

**At the Regional Level:** The MA program was designed in the framework of ASEAN collaboration while also considering the influence of economically powerful countries like China, South Korea and Japan. The program encourages students to apply their knowledge to understand social transformation in the region and look at how these issues relate to the influence of these economically powerful countries, especially China, which directly affects the economic, social and cultural change in Southeast Asia.

**At the International level:** The program also operated under the framework of "Sustainable Development Goals." The master's curriculum addresses global challenges that communities throughout Southeast Asian face, including direct approaches to at least four SDG's; goal 3) good health and well-being, the outcome of sustainable development; goal 5) gender equality and women's empowerment; reducing these inequalities while paying attention to the needs of disadvantaged and marginalized populations (ethnic

peoples, women and children, aging populations, and more); and goal 15) terrestrial ecosystems; focused on land degradation, intersecting with land grabbing processes and the political economy of capitalism under geopolitical power and influence.

### **Why MA Social Science?**

The Faculty of Social Science's mission is to contribute knowledge for society's needs and produce graduates who will be future leaders, offering new, sustainable alternatives in the field of development.

We believe our expertise as a center of transdisciplinary study is an essential tool in gathering data and conduct research which helps develop new ideas: to solve social problems, create innovative and effective policy, and increase participation at the public and community level. Social research and investigation helps make healthy policy and implementation, developing communities sustainably from the grassroots level.

### **Knowledge and Experience Gained from the Program**

Since the program was established in 2012, we have produced more than 100 graduates and students from a diverse range of countries; not only from South East Asia but also from other countries in Asia, Americas, Africa and Europe.

Most of our students apply their knowledge and experience from the program to their careers, working in a variety of sectors. Most of their works are related to social engagement, in nonprofit or state institutions, working with people or communities. Many of them continue their studies and build careers in academia.

### **Faculty of Social Sciences**

The MA in Social Science program has been operated under the Faculty of Social Sciences. Having long been establishing for more than 50 years, the Faculty has developed specific academic excellence in the field of sociology, anthropology, geography, gender studies, and development studies, and applied these particular social science theories to examine changes and transformation in society in different approaches that can keep pace with the changing situation and contribute to policy formulation.

All the expertise has laid solid foundation on contemporary research issues i.e. influence of China in Southeast Asia, transboundary environment issue (haze and smog), migration and development, urbanization and contemporary change, land grabbing in Southeast Asia. Core research centers under the Faculty who have been actively engaged in the research include the Regional Center for Social Science and Development, GIS, Indian Studies Center and Chinese and Southeast Asian Study Center.

Research clusters and centers have largely contributed to international and regional academic collaboration for more than 20 year i.e. network of Asia-China working with Yunnan University, Chongqing University, network of Europe-Southeast Asian university under the KNOTS project (funded by Erasmus+) that promotes transdisciplinary approach to examine contemporary emerging issues in Southeast Asia. Several networks has strengthened our program through research and exchange of faculties, staff and students with overseas universities.

The study programs under the Faculty of Social Science encourage students to link the knowledge gained with the society to promote social responsibility or so-called “public knowledge” and “public social science”. Several seminars and public forums have engaged students to interact with stakeholders being involved in the issues such as urban change to raise the public awareness that leads to problem solving at the policy level.

*The Curriculum gives emphasis on social sciences dimension in the study of development process and on livelihood security of different groups of people through four major approaches as follows;*

#### **Track of Development Studies**

The underlying philosophy of track of Development Studies is to integrate theories and social research from different disciplines including geography, sociology and anthropology in order to analyze the complexities and problematic impacts of the development process resulting from changes to state policies, laws, trade and investment, manufacturing and production. The program examines changes in natural resource uses, cultural transformations among migrant and ethnic populations, and health problems. Through its teaching and research, Development Studies aims to support ethnic groups and marginal populations to adapt to the changes taking place and to seek development alternatives, to participate in the decision-making and policy

formulation process, and to develop their potential in terms of adapting and challenging to future changes. The curriculum places its emphasis on the social science dimension within the study of the development process and livelihood security of different groups of people, through three research agendas, as follows:

- ❖ **Environment and Development**
- ❖ **Regionalization and Transnationalization**
- ❖ **Politics of difference**

### **Track of Ethnicity and Development**

Ethnicity as a subject focuses on the historical, political, economic and development dimensions of relations between ethnic groups. In the face of the complex dynamics of modern nation states, capitalism and globalization, it represents a methodology to understand the value of cultural diversities and human rights for the pursuit of peaceful coexistence in multicultural societies. This subject recognizes the potential of local wisdom and the adaptation of ethnic groups and other social groups to mainstream development and globalization processes in Thailand and the Southeast Asian region.

### **Track of Women's and Gender Studies**

Women's and Gender Studies program is focused on building and enhancing the critical interdisciplinary knowledge of women's and gender studies from various disciplines; social sciences, humanities, sciences, and other. It emphasizes on analysis of development change, including social, economic, political, and cultural problems, with an emphasis on feminist intersectionality theory – which uses gender, class, ethnicity, age or generation, and other relevant factors as units of analysis and the bases for research design. The aim is to succeed in getting sustainable development and gender equality and to strengthen the women's rights movement at both local, national, regional and international levels by concerning life experiences and quality of life of women's groups in societies.

### **Track of Health Social Sciences**

An analysis on health issues in an aspect of social sciences through participatory holistic approach in order to better understanding and promote health and well-being issues under the context of social and ecological interaction.

#### **1. Objectives: Produce graduates with following qualifications,**

- To understand complex social changes in development process, health system, environment, livelihood rights and security through contemporary social sciences perspectives such as social class, ethnicity and gender, for critical appraisal of development problems, policies and practices.
- To synthesize and generate new social science knowledge applicable to various social dynamics and environment base on the recognition of local wisdom and human agency of diverse groups.
- To be able to formulate holistic explanations of problems, resolutions and social practices from the integration of social science knowledge, theories, concepts and methodology from across its diverse ranges to comprehend social change and development process in accordance with the social and ecological contexts at the local, regional, and international levels.
- To be the key thinker and transferor of knowledge in societal resolutions who can work in public, private and civic organizations tasked with educating and researching for solving social problems.

## 2. Course Synopsis and Methodology:

### Study plan

#### Track of Development Studies

##### 1<sup>st</sup> Academic Year

1 <sup>st</sup> Semester		Credits	2 <sup>nd</sup> Semester		Credits
169701	Social Science Theories	3	169703	Research Methodology in Social Sciences	3
166701	Development Theories	3	166791	Seminar: Special Issues on Development Studies	3
	Elective course	3		Elective course	3
				Elective course	3
				Thesis Proposal defense	
<b>Total</b>		<b>9</b>	<b>Total</b>		<b>12</b>

##### 2<sup>nd</sup> Academic Year

1 <sup>st</sup> Semester		Credits	2 <sup>nd</sup> Semester		Credits
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169799	Thesis	15		Enrollment for University services	-
				Academic activity according to the Graduate School requirement (Publication)	
	<b>Total</b>	<b>15</b>		<b>Total</b>	<b>-</b>

### Track of Ethnicity and Development

#### 1<sup>st</sup> Academic Year

1 <sup>st</sup> Semester		Credits	2 <sup>nd</sup> Semester		Credits
169701	Social Science Theories	3	169703	<b>Research Methodology in Social Sciences</b>	3
156702	Concepts and Theories of Ethnicity and Development	3	156791	Seminar	3
	Elective course	3		Elective course	3
				Elective course	3
				Thesis Proposal defense	
	<b>Total</b>	<b>9</b>		<b>Total</b>	<b>12</b>

#### 2<sup>nd</sup> Academic Year

1 <sup>st</sup> Semester		Credits	2 <sup>nd</sup> Semester		Credits
169799	Thesis	15		Enrollment for University services	-
				Academic activity according to the Graduate School requirement (Publication)	
	<b>Total</b>	<b>15</b>		<b>Total</b>	<b>-</b>

### Track of Women's and Gender Studies

#### 1<sup>st</sup> Academic Year

1 <sup>st</sup> Semester		Credits	2 <sup>nd</sup> Semester		Credits
169701	Social Science Theories	3	169703	Research Methodology in Social Sciences	3
168700	Critical interdisciplinary Women's and Gender Studies	3	168791	Seminar: Special issues on Women's and Gender Studies	3
	Elective course	3		Elective course	3
				Elective course	3
				Thesis Proposal defense	
	<b>Total</b>	<b>9</b>		<b>Total</b>	<b>12</b>

**2<sup>nd</sup> Academic Year**

<b>1<sup>st</sup> Semester</b>		<b>Credits</b>	<b>2<sup>nd</sup> Semester</b>		<b>Credits</b>
16979 9	Thesis	15		Enrollment for University services	-
				Academic activity according to the Graduate School requirement (Publication)	
<b>Total</b>		<b>15</b>	<b>Total</b>		<b>-</b>

**Track of Health Social Sciences****1<sup>st</sup> Academic Year**

<b>1<sup>st</sup> Semester</b>		<b>Credits</b>	<b>2<sup>nd</sup> Semester</b>		<b>Credits</b>
16970 1	Social Science Theories	3	169703	Research Methodology in Social Sciences	3
17370 1	Health Illness and Society	3	173791	Selected Local Health Issue and Globalization	3
	Elective course	3		Elective course	3
				Elective course	3
				Thesis Proposal defense	
<b>Total</b>		<b>9</b>	<b>Total</b>		<b>12</b>

**2<sup>nd</sup> Academic Year**

<b>1<sup>st</sup> Semester</b>		<b>Credits</b>	<b>2<sup>nd</sup> Semester</b>		<b>Credits</b>
16979 9	Thesis	15		Enrollment for University services	
				Academic activity according to the Graduate School requirement (Publication)	
<b>Total</b>		<b>15</b>	<b>Total</b>		<b>-</b>

**Course Content/Study topic:****A: Required courses and Elective courses****B: Thesis course****C: Academic Ratification****A: Required courses and Elective courses****Required courses****12 credits****1) Joint courses****6 credits**

169701 SS 701

Social Sciences Theories

3 credits





Biopolitics; Feminism and Postcolonialism; Neoliberalism and Globalization; Theories of Space.

**169703 SS 703          Research Methodology in Social Sciences**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** 169701

This course introduces students to the qualitative and quantitative research methods, procedures and paradigms necessary for the investigation of social phenomena. While quantitative methods will be introduced, emphasis will be placed on the qualitative methods of social research, including participant observation, unstructured and semi-structured interviews, life histories and ethnographic field notes. All aspects of the research process will be covered, including formulating the research problem, ethical issues, developing the research question, designing the research and method, data collection, analysis and writing up. This course will also include a Field School component to be organized in March, when students will have the opportunity to undertake field research and apply social research methods *in situ*.

**Required courses in each track**

**Track of Development Studies**

**166701 SDS 701          Development Theories**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

This course will study and compare the development of, and debates on, the theories and concepts relating to development studies. The focus will be on the fundamental premises and approaches for the analysis of the ecological and social systems with an attempt to integrate both natural science and social science dimensions. The discussion will be made through concrete action programs on development studies with both state and local participation, such as community forestry, watershed management, agroecosystem, agroforestry, and indigenous

health systems. In addition, students will learn how development studies deal with both the interconnectedness of societies and regional and local specificities in a globalizing world.

**166791 SDS 791 Seminar: Special Issues on Development Studies**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

This course combines key elements of research seminar and basic training in qualitative research with an aim of assisting students in research proposal development. As a seminar course, it is designed for students to organize and present seminars on their proposed research topics which focus on 1) a critical review and assessment of the state of knowledge of the selected topic, and 2) a critical review of relevant theories and/or concepts.

**Track of Ethnicity and Development**

**156702 ETHD 702 Concepts and Theories of Ethnicity and Development**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Study of foundation and development of concepts and theories of ethnicity, ethnic classification, ethnic identity, relationships between nation-state, nationalism, globalization, ethnicity and multiculturalism; including the use of various social science theories and concepts to explain changes occurred within ethnic communities

**156791 ETHD 791 Seminar**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** 156702, 169701

Presentation and discussion of phenomena and research issues in ethnicity and development including emerging problems and current research findings related to ethnic groups as well as reviewing of related literature in detail

**Track of Women's and Gender Studies**

**168700 SWS 700 Critical Interdisciplinary Women's and Gender Studies**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Introduction to critical interdisciplinary women's studies with an emphasis on feminist intersectionality theory – which uses gender, class, ethnicity, and other relevant factors as units of analysis and the bases for research design

**168791 SWS 791 Seminar: Special Issues on Women's and Gender Studies**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** Approval of the course instructor

Seminar on special problems of women issues at international, regional and local levels, both policy and practical levels, particularly an analysis related to problems of family unit, culture, politics, economy and resource management as well as problems caused by dimensions of power relations, class, ethnicity and gender relations

**Track of Health Social Sciences**

**173701 HSS 701 Health Illnesses and Society**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Health Illness and Society, Response to illness, Medicalization Power relation and medical encounter, Comparative Health System, Health in Globalising context, Selected social issues in relating to health.

**173791 HSS 791 Selected Local Health Issue and Globalization**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Seminar Discussion and presentation on the applications of social science theories and concepts in order to understand and practically analyze globalization and local health problems and policy in various aspects

### *Elective courses*

Student must take at least 2 elective courses (6 credits) in his/her field of concentration.

He/she is able to choose any elective course outside his/her field of concentration, or any course with the consent of program committee.

#### ❖ **Elective courses in field of concentration**

##### **Track of Development Studies**

166711 SDS 711	Regionalization in Development Process	3 credits
166721 SDS 721	Knowledge, Rights and Globalisation	3 credits
166731 SDS 731	Cultural Economy	3 credits
166741 SDS 741	Ethnic Politics in Southeast Asia	3 credits
166751 SDS 751	Transborder Studies	3 credits
166761 SDS 761	Land Relations in Southeast Asia	3 credits
166789 SDS 789	Selected Topics on Development Studies	3 credits

#### **Course description:**

##### **166711 Regionalization in Development Process**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

This course covers different perspectives, approaches, and processes in regionalization of the Mekong. Shifting ideas of “the Mekong” will be investigated in order to understand different forces that underlie the making of this region from colonial period to the era of neo-liberalism. Current trend of economic regionalization will be discussed with its ramifications on agrarian

transformation, transborder trade, environmental politic, migration, social differentiation, cultural change, and civil society in the countries of the Mekong.

**166721 Knowledge, Rights and Globalisation**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Critical study of concepts of knowledge and rights from diverse and contradicting perspectives such as debates on scientific knowledge and local knowledge, power and knowledge, customary rights and public policies, local rights and intellectual property rights. The course places a special emphasis on current debates on resource competition, social movement, multi-scalar resource governance, co-management of natural resources, and co-production of knowledge in the context of local to global environmental change.

**166731 Cultural Economy**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Theory and concept of cultural economy, cultural production and consumption, creativity and innovation in cultural economy, politics of representation, political economy of mass media, cultural heritage and globalization, cultural tourism, affective economy, gender in cultural economy, reinvention of craft works, creative community economy, and social movements in global cultural economy

**166741 Ethnic Politics in Southeast Asia**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

- 1) This course aims to introduce the concept of ethnic identity seen from the essentialist and constructionist point of view. It will discuss different ways in which modern nation-states in Southeast Asia have dealt with ethnic minorities in each country.

- 2) It will examine the relationship between state and ethnic minorities in the context of development and modernization (globalization) and how the ethnic minorities have responded to changes initiated by state policy and market.
- 3) Focus will be placed on how ethnic minorities reconstruct their identity through different tactics, i.e. cultural, social, and economic capital as well as dealing with conflicts and tension from state policies and globalization.
- 4) The course aims to broaden the issues of identity politics from ethnic identity to other forms of social identities. It will examine how identity is defined and how societies use these constructions for nation-building, welfare distribution and economic development. The issues of indigenous and other forms of identity-based movements will also be discussed.

### **166751          Transborder Studies**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

This course explores issues related to the concepts of border and transborder practices. It focuses on the movements of people, goods and ideas across international borders and social relations that are built around such movements, as well as exploring transnational threat in the context of human security. The course has four main parts. These are related topics: each is necessary for understanding the others: [A] borders, nation and regulation; [B] borders and identity; [C] borders as contested space; and, [D] borders and contemporary issues. The course draws on various schools of thoughts within social and political sciences including international relations, geo-politics, anthropology, sociology, and development studies with an emphasis on transnational movement of people and the effects of such movements. By taking an inter-disciplinary approach, this course aims to facilitate a participatory learning process through interactive discussion, fieldtrip and writing assignment.

### **166761          Land Relations in Southeast Asia**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Changing land relations in Southeast Asia; Access and exclusion in land relations; Dispossession 1: land grabbing; Dispossession 2: Hydropower; Agrarian transformation;

Land tenure and territoriality ; Political ecology of land; Ethnicity and indigeneity and land issues; Urban land issues; Peri-urban land issues; Infrastructural violence and land relations; Human security and land; Natural disasters and dispossession; Regionalization of land issues; Overview and summary.

### **166789 Selected Topics on Development Studies**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Directed study of a selected topic on sustainable development. Theoretical and concept formulation for research and problem identification relating to thesis

Note: This is a one on one course.

#### **Track of Ethnicity and Development**

156701 ETHD 701	Multi-culturalism in Modern Societies	3 credits
156704 ETHD 704	Ethnic Studies in Southeast Asia	3 credits
156713 ETHD 713	Visual Ethnography	3 credits
156716 ETHD 716	Local Wisdom and Sustainable Development	3 credits
156718 ETHD 718	Indigenous People Rights, Mechanisms and Processes for Human Rights Protection	3 credits
156789 ETHD 789	Selected Topics in Ethnicity and Development	3 credits

#### ***Course description:***

### **156701 Multi-culturalism in Modern Societies**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Study of the co-existence of different cultures in modern society as a result of globalization and transnationalism and the subsequent ethnic tension and conflicts; theories of multi-culturalism and their critiques; various forms of nationalism, religion and nationalism, the problems of national identity, citizenship and political participation; hybridity and cultural movement

**156704 Ethnic Studies in Southeast Asia**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Study ethnographic works about various ethnic groups in Southeast Asia spanning from the periods of pre-modern nation-state to present; explore a wide range of historical records including legends, inscriptions, journals, missionary and/or government official reports as well as ethnographic and anthropological writings from colonial times to the present

**156713 Visual Ethnography**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Study concepts and methods of using visual media as a way to convey knowledge about ethnic minority people, definition of visual anthropology, concepts of representation, Ethnic prejudices and the media representations of ethnic people, using visual media as a tool for ethnic social movements, theory and concepts in ethnographic films, the roles of indigenous anthropologists, processes of making ethnographic films.

**156716 Local Wisdom and Sustainable Development**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Meaning of local knowledge systems and the importance of local knowledge in development and the approaches to study local knowledge. Local knowledge, ecological system, and cosmology. Local knowledge and scientific knowledge. Local knowledge and political ecology perspective. Revitalization of local wisdom in the modern society. Practices of local community on resource management, health care, and cultural conservation: experiences of local wisdom leaders. Local wisdom in the globalization context. Local wisdom, capitalist and market. Intellectual property and community rights. Local wisdom and social enterprise. Networks and ethnic movement in the Greater Mekong Subregion for protection the ecosystem and local wisdom.

**156718 Indigenous People Rights, Mechanisms and Processes for Human Right**



### **Protection**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Study of principles and concepts of indigenous people rights, impact of development and state policy on indigenous people rights, a variety of indigenous people rights, citizenship law and civil rights in Thailand, including claiming for rights of indigenous people; understanding international conventions and agreements on indigenous people and mechanisms of international organizations in protecting indigenous people rights.

### **156789 Selected Topics in Ethnicity and Development**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Study of a selected topic which is not listed in the regular courses, aiming at helping students to integrate knowledge and attain deeper theoretical understanding which will enable them in conceptualizing a research problem with supervision of an instructor specializing in that selected topic.

#### **Track of Women's and Gender Studies**

168750 SWS 750	Development in Gender Perspectives	3 credits
168751 SWS 751	Feminist History of ASEAN Human Right and Development	3 credits
168752 SWS 752	Feminist Political Ecology and Gender	3 credits
168753 SWS 753	Gender in Media, Language and Literature	3 credits
168789 SWS 789	Selected Topic on Women's and Gender Studies	3 credits

#### ***Course description:***

### **168750 Development in Gender Perspectives**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Analysis and critiques of liberal and neo-liberalism, globalization and patriarchy, critical studies of development of development from different feminist and gender perspectives, critiques of concepts on Women in Development (WID), Women and Development (WAD), Gender and Development (GAD), critique of postmodern feminism, poststructural feminism, critique of Third- World feminism and postcolonial feminism, critique of development policies from feminist and gender and development perspectives, case studies in Thailand and Southeast Asian countries

**168751 Feminist History of ASEAN and Human Rights and Development**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

History of thought and feminist movements at international level, history of thought and feminist movements at regional, national, local and ethnic groups, critique and deconstruct mainstream development history of ASEAN, gendered experiences of difference, complexity, dynamism and human rights, seeking new ways to rewrite history

**168752 Feminist Political Ecology and Gender**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Women and gender as users, preservers, and rehabilitators of the environment, global politics, state policies towards the environment and environmental studies, Feminist Political Ecology, gendered impacts of local and global environmental crises upon women and diverse gender, the socio- cultural foundation of resistance for preservation and rehabilitation of the environment, patterns of women's resistance to protect and rehabilitate the environment.

**168753 Gender in Media, Language and Literature**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Cultural construction of gender, construction of meaning, representation, signs, interpretation, and deconstruction, feminist literary criticism, women and diverse gender in Thai and ASEAN literature

**168789 Selected Topics on Women's and Gender Studies****Course Type:** Lecture**Measurement and Evaluation:** A-F**Prerequisite:** None

Directed study of a selected topic on women's and gender studies, theoretical and concept formulation for research and thesis problem identification

**Track of Health Social Sciences**

173721 HSS 721	Ageing Medicine and Society	3 credits
173722 HSS 722	Transnational Mobility and Health Inequality	3 credits
173723 HSS 723	Socio-cultural Perspectives of Food and Health	3 credits
173730 HSS 730	Health Business, Medicine and Tourism	3 credits
173789 HSS 789	Selected Topic in Health Social Sciences	3 credits

***Course description:*****173721 Ageing Medicine and Society****Course Type:** Lecture**Measurement and Evaluation:** A-F**Prerequisite:** None

Population change and social phenomena of ageing, definition of ageing and social meanings, social concepts of ageing, lifestyles social roles and health of ageing in modern family setting, Commodification, medicine and ageing health, ageing and social inequality, health policy and the diversification of ageing in modern society

**173722 Transnational Mobility and Health Inequality****Course Type:** Lecture**Measurement and Evaluation:** A-F**Prerequisite:** None

Mobility in the age of trans-nationalization, Transnational mobility and health situation, Patient mobility and medical tourism: rights and health consumption, Transnational health care provision: quality and equity of access, Health care system: maintaining health equality

and transnational health consumption, Example of cross border health care management and the concept of transnational health regions development

**173723                      Socio-cultural Perspectives of Food and Health**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Food in modern society and the sociological and anthropological concepts of food, the scientification of food, the commercialization of food and medicalized food, beliefs, health and food consumption, cultural food preservation, social class and health in Asia region, food in family setting and food security

**173730                      Health Business, Medicine and Tourism**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Globalization, capitalism and health care, health care and medicine as commoditization, inequity in health care, health security and health commodity, health goods and constructing discourse through health professionals, advertisement and bio-medical language, bio-medical ethics and commodification the process of health care and medicine commodification, health, medicine and free trade regime, health, medicine and tourism, case study; genomic medicine, organ transplantation, cosmetic medicine, aging and health tour, health spa, alternative medicine

**173789                      Selected Topics in Health Social Sciences**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Selected topic on health in social science perspectives relevant to academic and contemporary social and health situation

**Other Elective courses**

154711 GEO 711	Environmentalism and Environmental Policies	3 credits
154714 GEO 714	Political Ecology	3 credits

159712	SA 712	Resource Governance and Civil Society	3 credits
159723	SA 723	Economic Sociology and Anthropology	3 credits

***Course description:*****154711 Environmentalism and Environmental Policies****Course Type:** Lecture**Measurement and Evaluation:** A-F**Prerequisite:** None**Course Description:**

A seminar course on ways different social groups conceptualise the environment, and how they use environmental ideas to address environmental problems and mobilise for changes in environmental policies. Classification of environmental ideologies. Neo-Malthusianism and debates on population and environment. Gender and environment. Deep ecology, social ecology, bioregionalism. Religions and environment. Local ecological knowledge. Animal rights. Case studies on contesting discourses in formulation processes of environmental policies at multiple scales.

**154714 Political Ecology****Course Type:** Lecture**Measurement and Evaluation:** A-F**Prerequisite:** None

Political ecology is an analysis of natural resource and environmental degradation in the context of political economic configuration. It combines political economy with ecology, especially in terms of competing controls over access to, use, conservation, and ownership of natural resources and the environment. The conflicting roles of the state, market economy, civil institutions, and other social actors in natural resource management are examined with the process of political economic and ecological transformation of developing countries. Property rights over natural resources at various social settings and geographical scales are also the focal point of investigation. The contested point of views and the discourse on society-environment interactions are also brought into discussion and rebuttal.

**159712 Resource Governance and Civil Society**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Debates on concepts and theories of rights and power over access to resources, political and economic processes of control and management of resources, multiplicity of various levels of rights, dynamics of community-based resource management, globalization and commoditization of resources, politics of contestation for resources and the formation of civil society, discourses and practices of resource governance, including decentralization of resource management and civil society participation, as well as knowledge spaces of common property management under the regionalization of development

**159723 Economic Sociology and Anthropology**

**Course Type:** Lecture

**Measurement and Evaluation:** A-F

**Prerequisite:** None

Diversity and complexity of changing economic processes in all levels of socio-cultural relations; local, regional and global, the debates on values and meaning of the gift exchange and the commodity, the problems of the transitional economy and the conflicts of access to resources

under the capitalist market economy, multiplicity of the restructuring of rural economy under neo-liberalism, the discourses and politics of production, meanings of work and labor in agro-food industry, including the globalization of cultural economy, cultural industry and tourism

**B: Thesis course**

**169799 Thesis (15 Credits)**

**Measurement and Evaluation:** S

**Enrollment:** Students are allowed to enroll this course when their thesis proposals are approved.

**Graduation Conditions:**

1. Earning GPA of at least 3.00 for all courses taken, and a GPA of not less than 3.00 for

the chosen of specialization

2. Pass thesis examination and submit it to the graduate school
3. At least 1 master's thesis work or a part of thesis's work must be published or at least

accepted to be published as follow;

- a. Published in academic journal (national-level journal listed in TCI Tier 1 database Or
- b. International conference proceeding with a full-paper.

**Applicant Qualifications and Required Documents for admission:**

1. Have a bachelor's degree or equivalent.
2. Have knowledge of English language, at least one of the following
  - A: TOEFL at least 523 (PBT), 523 (ITP), 193 (CBT), 69 (IBT)
  - B: IELTS at least 5.5

**Required Documents for admission**

1. Motivation letter
2. Curriculum Vitae (CV)
3. The applicant's statement with information as follow;
  - A: Choose track of study
  - B: Statement of tentative research project or field of research interests
4. An official transcript written in English
5. A Copy of degree certificate with English translation
6. Two letters of recommendation
7. A certificate of English proficiency, one of the following;
  - A: TOEFL at least 500 (PBT)/, 173 (CBT), 61 (IBT)
  - B: IELTS at least 5.5

\*English Certification must be current for the application period
8. A copy of valid passport (biography page)

**Contact person:**

**>> Academic information and application process**

Please contact Mrs. Rungthiwa Hacker (Ann)

Email: [rcsd@cmu.ac.th](mailto:rcsd@cmu.ac.th)

**>> Student coordinator (TIPP scholarship recipients)**

Please contact Ms. Kanokkan Sokanket (Shirley)

Email: [rais.soc@gmail.com](mailto:rais.soc@gmail.com)

## **Academic Calendar**

Semester 1: June – October

Semester 2: November – March

Summer semester: April – May

### **For more information:**

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E-mail: [tipp@mfa.mail.go.th](mailto:tipp@mfa.mail.go.th)

\*\*\*The application procedure will complete when TICA has received the hard copy of the application form and other related documents through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible countries/ territories.