

Attachment 2  
1908171011.00

### Course Title

## Master of Science Program in Food Technology

**Master Degree:** Master of Science Program in Food Technology

**Academic Institution:** School of Agro-Industry, Mae Fah Luang University, Chiang Rai

**Duration:** Two (2) academic years; 1<sup>st</sup> semester: August - December  
2<sup>nd</sup> semester: January - May

### Objective:

The Master's program in Food Technology is aimed at students who want to learn more about agricultural and food products and who want to collaborate in the future social innovation. The program covers the design and production of foods with safe, health and trends. This program is research-oriented and focuses on the interface between complex food matrixes and technical processes in the development and production of value-added agricultural, food and nutritional products. In this program, students acquire expertise in the advanced knowledge of food matrixes and technical processes of foods to develop processing techniques and/or appropriate formulas combined with a thorough understanding agricultural and food products with safe, health and trend issues. The creation of innovative products and technologies, followed by transferring the results of research, according to consumers or user's need are the importantly key aspects of this program.

### Course Synopsis and Methodology:

The Master's program in Food Technology (2017-2021), focuses on the interface between complex food matrixes and technical processes in the development and production of value-added agricultural, food and nutritional products. All course are designed to provide advanced knowledge of complex matrixes and manufacturing processes for creation and investigation of properties and compositions to optimize quality in the development and production of value-added agricultural, food and nutritional products. Courses feature both theoretical and practical learning. The core courses include Advanced Statistics and Experimental Design, Research Methodology and Seminar 1-2. Students can choose their own elective courses that meet student's personal interests in 5 areas, including

- (1) Food Chemistry and Food Analysis,
- (2) Food Safety and Food Microbiology,
- (3) Food Biotechnology,
- (4) Food Processing and Food Engineering and
- (5) Food Product Development and Food Innovation.

Recommended course based on the program objectives include Advanced Food Chemistry and Food Analysis, Nutraceutical and Functional Food, Advanced Food Processing, Quality Control and Design, Food Innovation and Product Design, Experimental Design in Innovative Product Development, Sensory Evaluation, Advanced Food Microbiology and Food Safety and so on. This program is research-oriented and requires research Master's thesis to demonstrate student's ability to conduct independent scientific work in a field of Food Technology. A student usually works together with an advisor to develop course goals and requirements.

The instructional methods are implemented using Outcome Based Education (OBE) as a tool to stimulate the active learning environment. Students are engaged in class activities in order to construct and develop their knowledge, communication, and skills. Various techniques, such as lectures, practical, seminars, intensive tutorials, individually supervised project, brainstorming, role playing, mind mapping, collaborative or cooperative learning, problem-based learning and case-study learning are used for appropriate learning objectives, providing a clear way to deliver the course schedule and engage students in class. Various assessment methods is used via Outcome Based Assessment (OBA) based on class activities and designed courses. After completing the program, students will gain advanced knowledge, communication, and success skills which allow them to become efficient researchers in national and international universities or institutions, project management, quality assurance, and technical supervision in the Food industry and its related-industries.

#### **Course Content/Study Topic:**

The curriculum of Master of Science Program in Food Technology offers 2 study plans, plan A1: Thesis and plan A2: Coursework and Thesis.

#### **Plan A1 Thesis (36 Credits)**

The degree requirement includes 36 credits of research-intensive Master's thesis and two seminar courses. Research-intensive Master's thesis allows students to demonstrate ability to

conduct independent scientific work under the supervision and approval of the thesis defense committee. Research topic can be academic in nature, or developed within industry, based on individual interests and/or current research project of lecturers in the Food Technology program. The research can be carried out either in Mae Fah Luang University or our collaborated-partners in abroad.

#### Plan A2: Coursework (24 Credits) and Thesis (12 Credits)

Program structure includes core courses and elective courses. Core courses emphasize on Advanced Statistics and Experimental Design, Research Methodology and Seminar 1-2. Elective course cover a broad range of subjects intended to broaden the student's knowledge. In the first year of the program, the focus lies on core courses and major elective courses connecting soft matter science approaches with advanced knowledge necessary to understand all aspects of the processing of a complex food matrix. Students can choose elective courses according to individual interests and preferred areas of specialization. Students become familiar with scientific approaches such as advanced concepts in processing methods, instrumental methods, research methods and statistical methods, communication skills and practical skills during seminars, lecture and practical hours. In the second year of the program, knowledge and practical skills acquired in the first year are expanded by conducting research Master's thesis, allowing students to identify, analyze, solve a problem and demonstrate ability to conduct independent scientific work under the supervision and approval of the thesis defense committee. Research topic can be academic in nature, or developed within industry, based on individual interests and/or current research project of lecturers in the Food Technology program. The research can be carried out either in Mae Fah Luang University or abroad.

#### Research focus areas

Research in the fields of Food Technology at School of Agro-Industry, Mae Fah Luang University focus on characterization, technical/optimized process and development/innovation of valued-added agricultural, food and nutritional products with safe, health and trend issues. The research activities focus on the exploration and investigation of compositions, properties, interaction, and alterations of compounds, nutrients, ingredients, microorganisms or enzymes as well as contaminants in agricultural products, food and nutritional products during processing and storage. The research activities also focus on isolation, extraction and purification of functional ingredients from agricultural products to improve the quality of food products, formulate and develop innovative food products which have additional benefits for specific consumer groups.

### **Cooperation**

In order to further expand and improve successful ongoing research projects as well as to create sustainable synergies, program is engaged in successful and intense cooperation with excellent partners in both national and global academic realm, including; Chiba University, Shinshu University, Japan; Bogor Agricultural University, Indonesia; Universiti Teknologi Mara, Malaysia; Universiti Putra Malaysia, Malaysia; Hohenheim University, Germany; Mendel University in Brno, Czech Republic; and is part of the AIMS programs.

### **Occupational fields**

- Research groups in national and international universities or institutions
- Research and development, project management, quality assurance, and technical supervision in the following industrial sectors:
  - Food industry and its supplying industries
  - Biotech, Pharmaceutical and health care industry
  - Equipment, process, and packaging technology
  - Private and public research institutes
  - Business consulting

### **Reasons to Choose Food Technology, School of Agro-Industry, Mae Fah Luang University**

- Small degree programs with an excellent student-teacher ratio
- Degree programs focused on connecting research and teaching
- Students are encouraged to take part in meetings, conferences, and taskforces that provide unparalleled networking opportunities.
- Modern laboratories and practical course rooms with the newest equipment
- Technical centers with pilot plants for research and education provide the opportunity to design and test new technological devices and processing techniques
- Opportunities to take Double Degree Program and gain Double Master Degree with our partners.
- Opportunities to study abroad in the student-exchange program.

### **Qualification:**

Students with a bachelor's degree in Food Science, Biology, Chemistry, Biochemistry, Nutrition, Biotechnology, Agricultural and related fields with cumulative undergraduate GPA  $\geq 2.5$  and TOEFL score  $\geq 450$  are encouraged to join the program. The program admissions committee makes all admission consideration on case-by-case basis.

**Document Required:**

- Application affixed with photographs
- A copy of transcript from institutions attended;
- Evidence of English proficiency, TOEFL exam or others
- Statement of purpose
- Letters of recommendation from referee
- A copy of passport

**Closing Date for Nominations: May 2017**

**Late or incomplete applications/documents will not be considered.**



Thailand International Cooperation Agency  
Ministry of Foreign Affairs of Thailand

GUIDELINES

for Thailand International Postgraduate Programme (TIPP)

1. Qualifications

1.1 Candidates must be nominated by central government agencies in a country from the TIPP eligible countries/territories list. (See "List of Eligible Countries/Territories")

1.2 Candidates should be an officer or agent (preferably from government agencies) currently working in the area related to the course provided.

1.3 Candidates must have bachelor degree and/or professional experience related field or related to graduate degree.

1.4 Candidates must have a good command of English.

1.5 Candidates whose English is not the first language/Bachelor's degree was not taught in English/who is from a country other than New Zealand, USA, the United Kingdom, Australia, Canada has to pass an English Language proficiency test according to criteria announced by University regulations.

1.6 It is recommended that candidates be less than 50 years of age.

1.7 Candidates must have good physical and mental condition.

1.8 TICA reserves the rights to revoke scholarship offered to participants who are pregnant during the period of study or violate rules and regulations.

1.9 Other requirements apart from these will be under consideration by the University regulations.

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## 2. Procedures for submission of nominations

2.1 Nomination must be made by central government agencies in charge of nomination of national candidates (such as Ministry of Foreign Affairs) or by relevant central government agencies for which the nominated candidates currently work. Nomination must be in line with relevant rules and regulations of the nominating countries/territories.

Each eligible country/territory can nominate up to five (5) candidates per academic program.

2.2 The nomination must be supported by the following four (5) documents:

- Application form
- Medical Report
- Transcript
- Recommendation letters
- English score (e.g TOEFL/IELTS)

One original with two (2) copies of all forms duly filled out counter-signed and stamped by the authorized person must be submitted.

2.3 The nomination must be submitted to TICA through the Royal Thai Embassy/ Permanent Mission of Thailand to the United Nations/ Royal Thai Consulate-General accredited to eligible countries/territories. (See "List of Eligible Countries/Territories")

2.4 Originals of nomination documents, duly filled out, must be received no later than a specified deadline of each academic program.

2.5 Application form must be filled in typed-block letter. Soft file of the Application Form and Medical Report Form can be found at

<http://www.tica.thaigov.net/main/contents/files/information-20161217-152430-795372.pdf>

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### **3. Selection of candidates**

3.1 In considering applications, particular attention shall be paid to the candidates' academic background, their current position in the service of their Government, and practical use they expect to make of the knowledge and experience gained from graduate on the return to their Government positions.

3.2 Selection of Candidates is also based on geographical distribution and gender balance, unless priority is set for particular country/ group of countries

### **4. Condition for Attendance**

4.1 Awardees are required to study full time and not to change the program topic/ study plan

4.2 Any part time employment is not allowed.

4.3 Awardees are not allowed to bring any family members to stay with them during study.

### **5. Travel and financial arrangements**

5.1 Successful candidates will be offered an award which covers:

- Return economy class airfare
- Accommodation allowance
- Living allowance
- Book allowance
- Thesis allowance
- Settlement allowance
- Insurance
- Airport meeting service



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## 5.2 Regulations on travel.

- Return economy class airfare

- International travel - Return economy class air ticket will be provided via the most direct and most economical route from the international airport at participant's respective country/territory to the Suvarnabhumi International Airport, Bangkok - Thailand. The award does not cover domestic travel cost in participant's respective country.

Transit destination will be arranged according to a need for visa application to Thailand and/or on the most direct and most economical route basis.

All booking and change to the booking, including a setting of date of arrival and departure, must be done by TICA only. Ticket will be issued in electronic form (e-ticket) only.

Baggage allowance quota is in line with the airlines' policy. Any purchase for extra baggage allowance is not covered by the award.

- Domestic travel - will be provided via the most economical route from the Suvarnabhumi International Airport, Thailand to the airport where the university located.

- Insurance - Group Accident and Hospitalization Insurance during the period of study in Thailand will be provided. Costs of pre-existing illnesses, dental treatment, brain disease, mental illness, pregnancy and glasses are NOT covered. Awardees are advised to obtain their own travel insurance which is fully covered for any costs arising from loss or theft of personal belongings.

- Airport meeting service - Transfer to and from airport will be provided to awardees. TICA will coordinate directly with the limousine service, upon arrival at the Suvarnabhumi International Airport please proceed to the AOT Limousine Customer Relations counter and hand the instruction of scholarship award to prepare for the airport transfer. A taxi fare paid by awardees cannot be reimbursed.

- Visa arrangement - Awardees will be responsible for obtaining "Non - F" visa prior to their travel to Thailand. TICA will provide facilitation to participants who require visa application i.e. liaising with the Royal Thai Embassy/ Consulate and advising on appropriate procedure and necessary documents for visa application.

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Awardees must cover all costs arising from visa application i.e. visa fee, travel cost to the Royal Thai Embassy/ Consulate, postal fee (in case visa application is made by post.) transit visa fee (in case participants needs to apply for visa to Thailand at a transit country). The visa fee can be reimbursed upon presenting an original receipt of the fee but not exceed 2,000 THB.

Awardees must not bring their family members with them during their scholarship program. Awardees in the scholarship program cannot be used as reference for visa application to Thailand of his/her family member.

#### 6. Contact

For more information, please contact.

Bureau of International Cooperation on Human Resource Development

Thailand International Cooperation Agency (TICA)

Government Complex, Building B (South Zone), 8<sup>th</sup> Floor,

Chaengwattana Rd. Laksi District,

Bangkok 10210

THAILAND

Website : [www.tica.thaigov.net](http://www.tica.thaigov.net)

Email : [pattara\\_pattinson@hotmail.com](mailto:pattara_pattinson@hotmail.com)

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Thailand International Development Cooperation Agency (TICA)  
Ministry of Foreign Affairs

**APPLICATION FORM**  
for Thailand International Postgraduate Programme: TIPP

FOR OFFICIAL USE ONLY  
Reference No. ....  
Received: .....  
Checked: .....

**INSTRUCTIONS**

This application form is composed of five parts. Part A to part E should be completed in triplicate. part A to part D should be completed by the candidate and part E by the government authority. **All application form must be filled in typewritten form. Each question must be answered clearly and completely. Detailed answers are required in order to make the most appropriate arrangements.** Official authority of the nominating Government will then forward three copies of original of all certified application forms to the Thailand International Cooperation Agency (TICA), the Government Complex, Building B (South Zone), 8<sup>th</sup> Floor, Chaengwattana Road, Laksi District, Bangkok 10210, THAILAND, through the Royal Thai Embassy/Permanent Mission of Thailand to the United Nations/Royal Thai Consulate – General accredited to eligible/territories. The nominee is required to attach medical report or health status certification. **No consideration will be given to the late submissions or incomplete applications/documents.**

(Please attach photograph here)

Course Name: .....

**A. PERSONAL HISTORY**

Title	Family name (as shown in passport and kindly attach the copy of your passport, information will be used for travel arrangement)	Middle name	Given name	Gender	
<input type="radio"/> Mr. <input type="radio"/> Mrs. <input type="radio"/> Ms. <input type="radio"/> .....				<input type="radio"/> Male <input type="radio"/> Female	
City and country of birth	Nationality	Date of birth (DD/MM/YY)	Age	Marital Status	Religion
Work address (Please complete this section as clear as possible, information will be used for travel arrangements.)		Home address (Please complete this section as clear as possible, information will be used for travel arrangements.)			
Fax No: (Country Code / Area Code/ Number)		Telephone No : .....		Telephone No : .....	
		Telephone No : .....		Fax No : .....	
		International Airport/City for departure :			
Update email address:					
Name and address of person to be notified in case of emergency :					
.....					
Telephone No : ..... Relationship of this person to you :					

Languages:	READ			WRITE			SPEAK		
	Excellent	Good	Fair	Excellent	Good	Fair	Excellent	Good	Fair
Mother tongue: .....									
English									
Others:0 .....									

English Proficiency Test (please attach)  TOEFL Score .....  IELTS Score .....  
 (only a candidate for a degree course)  Other (specify) .....

**EDUCATION RECORD**

Education Institution	City / Country	Years Attended		Degrees, Diplomas and Certificates	Special fields of study
		From	To		

Have you ever been trained/studied in Thailand? If yes, what course, where and for how long?  
 ...  No  
 ...  Yes, please specify .....

Please give a list of relevant publications/researches (do not attach details)  
 .....  
 .....  
 .....

**B. EMPLOYMENT RECORD:** It is important to give complete information. For each post you have occupied, give details of your duties and responsibilities.

Present or most recent post : Dates from _____ to _____ Title of your post: Name of organisation: Type of organisation: Official address:	Description of your work, including your personal responsibilities
Previous post : Dates from _____ to _____ Title of your post: Name of organisation: Type of organisation: Official address:	Description of your work, including your personal responsibilities

**C. REFERENCES:** Please attach the recommendation letters from three (3) persons acquainted with your academic and professional experiences.

**D. EXPECTATIONS**

Please describe the practical use you will make of this training/study on your return home in relation to the responsibilities you expect to assume and the conditions existing in your country in the field of your training. (Give the attached paper, if necessary)

.....  
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.....

I certify that my statements in answer to the foregoing questions are true, complete and correct.

If accepted for a scholarship award, I undertake to :-

- a) carry out such instructions and abide by such conditions as stipulated by both the nominating government and the host government in respect of this program of scholarship;
- b) follow the program of scholarship, and abide by the rules of the University and Thailand International Cooperation Agency in which I undertake the scholarship;
- c) refrain from engaging in political activities, or any form of employment for profit or gain;
- d) study full time, make academic progress and submit progress reports to Thailand International Cooperation Agency;
- e) not bring any member of my family to stay with me during the course;
- f) return to my home country promptly upon the completion of my program of scholarship.

I also fully understand that if I am granted a scholarship award and violate Thailand International Cooperation Agency's rules and regulations, I may be required to return part or all of the scholarship paid, depending on the severity of the violation, without any appeal.

Signature of applicant: .....  
Printed name: .....  
Date: .....

**E. GOVERNMENT AUTHORISATION:** To be completed by the central government agencies in charge of nomination of the candidates (see guideline for TIPP for detailed information on nomination.)

I certify that, to the best of my knowledge,

- (a) all information supplied by the nominee is complete and correct;
- (b) the nominee has adequate knowledge and experience in related fields and has adequate English proficiency for the purpose of the scholarship in Thailand.

On return from the scholarship, the nominee will be employed in the following position:

Title of post .....  
Duties and responsibilities .....

(Official stamp)

.....  
*Signature of responsible Government official*

Title: .....  
Organisation: .....  
Official address: .....  
.....  
Date: .....

**Attachment**

<b>ME</b>	<b>T</b>		
Name of Nominee .....			
Country .....	Age: ..... Gender .....		
<b>Physical Examination (To be filled in by physician)</b>			
Height ..... Cms.	Weight ..... kgs.	Blood Pressure ..... mm.Hg.	Pulse ..... /min.
Vision Right .....	Left .....	Eyes .....	With glasses / Without glasses
Check each item in appropriate column			
<b>Items</b>	<b>Normal</b>	<b>Abnormal</b>	<b>Additional Comments</b>
General	<input type="radio"/>	<input type="radio"/>	.....
Skin, Scalp	<input type="radio"/>	<input type="radio"/>	.....
Lymph nodes	<input type="radio"/>	<input type="radio"/>	.....
Eyes	<input type="radio"/>	<input type="radio"/>	.....
Ears	<input type="radio"/>	<input type="radio"/>	.....
<b>Orthoscopic Exam</b>			
Nose	<input type="radio"/>	<input type="radio"/>	.....
Pharynx & tonsils	<input type="radio"/>	<input type="radio"/>	.....
Teeth	<input type="radio"/>	<input type="radio"/>	.....
Thyroid gland	<input type="radio"/>	<input type="radio"/>	.....
Lungs	<input type="radio"/>	<input type="radio"/>	.....
Heart	<input type="radio"/>	<input type="radio"/>	.....
Abdomen	<input type="radio"/>	<input type="radio"/>	.....
Liver	<input type="radio"/>	<input type="radio"/>	.....
Spleen	<input type="radio"/>	<input type="radio"/>	.....
Hernia	<input type="radio"/>	<input type="radio"/>	.....
External genitalia	<input type="radio"/>	<input type="radio"/>	.....
Rectal exam	<input type="radio"/>	<input type="radio"/>	.....
Vertebrae	<input type="radio"/>	<input type="radio"/>	.....
Locomotor	<input type="radio"/>	<input type="radio"/>	.....
Reflejes	<input type="radio"/>	<input type="radio"/>	.....
Mental Health status	<input type="radio"/>	<input type="radio"/>	.....

**LABORATORY EXAMINATIONS**

Blood group ..... Blood film for malaria ..... Hb ..... gm%

WBC ..... Cells/cu.mm.

Differential: PMN ..... % Lymph ..... % Mono ..... % Eos ..... %

Baso ..... % Band ..... % Blast ..... %

: Colour ..... Sp. Gr ..... pH .....

Sugar .....

Alb ..... Blood ..... Ketones ..... Bile.....

Micro: WBC ...../HPF, RBC ...../HPF, Epithelial...../HPF.

Casts ...../HPD, Others .....

Stool examination for parasite & Ova .....

Chest X - Ray report .....

Urine pregnancy test .....

Is the person examined at present in good health and able to work full time?  
.....

Is the nominee able physically and mentally to carry on intensive study away from home?  
.....

Is the nominee free from infectious diseases (such as tuberculosis, leprosy, syphilis and filariasis) and other conditions (such as psychosis and drug addiction) which could present risks for anyone during the scholarship period?  
.....

(For female nominee) Is the person examined pregnant?  
.....

Does the nominee have any condition or defect which might require treatment during the scholarship period?  
.....

I certify that the applicant is medically fit to undertake the scholarship in Thailand.

Physician signature (with stamp) .....M.D.

(.....)

Full name and address of Examining physician (printed)

Place and Date.....

Telephone: .....

(printed)

e-mail: .....