# Master & Doctor of Philosophy Programs in Applied Microbiology

**Research Fields** 

Applied Microbiology Microbial Diversity Environmental Microbiology Medical Microbiology Industrial Microbiology Microbial Genomics Microbial Resources and Application Microbial Technology Agricultural Microbiology Food Microbiology Molecular Microbiology

For more information, please visit the following website. www.biology.science.cmu.ac.th



# Master of Science Program in Applied Microbiology (International Program)

Type 1 (Plan A Type A1)					
Degree Requirements	36	credits			
A. Thesis					
215797 Master's Thesis	36	credits			

### B. Academic Activities

- The whole or a part of the thesis of a student must be published or accepted for publication in an ACI journal or in an international journal indexed in ISI, SCOPUS, IEEE, PubMed, or Web of Science (at least 1 article is required); and must be presented in a national or an international academic conference that is accepted in the program (at least 1 presentation is required). The student must be the first author affiliated with "Master of Science Program in Applied Microbiology (International Program), Faculty of Science, Chiang Mai University)" in the main publication and presentation. A granted patent or petty patent can be accepted instead of a published paper.
- 2) Every student is required to submit a progress report to the Graduate School every semester, which is to be approved by the Chairman of the Faculty's Graduate Study Committee and reported to the University's Graduate School.

# C. Non-credit Courses

1) Graduate School requirement

a foreign language

- 2) Program requirements
  - 2.1) Every student is required to take the following Seminar courses:
    - 215791 M.S. Seminar in Applied Microbiology 1
    - 215792 M.S. Seminar in Applied Microbiology 2
    - 215790 M.S. Seminar in Applied Microbiology 3
  - 2.2) A student may take courses necessary for his/ her thesis under the recommendation of the thesis advisor.

#### Type 2 (Plan A Type A2)

Degree Requirements	Fotal a	a minimum of	36	credits
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#### A. Coursework

- a minimum of 21 credits
- 1) Graduate Courses

a minimum	of	21	credits
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1.1) Field of Specializatio	n a minim	num of	15	credits		
Courses in the Field	of Specialization	are courses in g	raduate	e level		
in Microbiology.						
1.1.1) Required Courses		:	2 credits			
215791	M.S. Seminar in	Applied Microbio	ology 1		1	credit
215792	M.S. Seminar in	Applied Microbio	ology 2		1	credit
1.1.2) Elective course	2	a minim	um of		13	credits

(2157...courses listed below or additional 2157...courses)

		215711	Food Bacterio	.ogy		3	credits
		215713	Plant Virology			3	credits
		215732	Advanced Yea	st Genetics		3	credits
		215733	Bacterial Genc	mics		3	credits
		215734	Molecular Mic	robiology and		3	credits
			Immunology T	echnology			
		215741	Physiology of I	<sup>-</sup> ungi		3	credits
		215742	Advanced Phy	siology of Plant [	Diseases	3	credits
		215743	Advanced Bac	terial Physiology		3	credits
		215744	Advanced Mic	robial Pathogene	sis	3	credits
		215752	Methods in Mi	crobiology		3	credits
		215761	Advanced Taxo	nomy of Slime M	1olds,	3	credits
			Pseudofungi ar	id Lower Fungi			
		215762	Advanced Tax	onomy of Higher	Fungi	3	credits
		215771	Soil Bacteriolo	gy		3	credits
		215780	Alternative En	ergy from Microo	rganisms	3	credits
		215781	Microbial Tech	inology		3	credits
		215782	Algal Technolo	ogy		3	credits
		215783	Advanced Microbial Enzyme Technology			3	credits
		215784	Microbial Process Development			3	credits
		215785	Advanced Microbiology			3	credits
		215787	Molecular Virology		3	credits	
		215788	Manuscript Pre Publication	eparation for Micr	obiological	1	credit
		215793	Selected Topic	cs in Microbial Te	chnology	1	credit
		215794	Selected Topic	cs in Microbial Te	chnology	2	credits
		215795	Selected Topi	cs in Microbial Te	echnology	3	credits
	1.2) Othe	er Courses (if any	·)	a maximum of	6	credits	
	1.2.1	) Required Cours	es	none			
	1.2.2	) Elective Course	es (if any)	a maximum of	6		credits
		A student may	take elective c	ourses related to	the field of h	is/her the	sis unde
		the recommend	dation of the th	esis Advisor.			
2)	Advanc	ed Undergraduat	te Courses		none		
B. The	esis						
215	799	Master's Thesis			15	credits	
C. Noi	n-credit Co	ourses					
1) (	1) Graduate School requirement:				a fore	eign langu	lage
2) Program requirement						none	

# D. Academic Activities

The whole or a part of the thesis of a student must be published or accepted for publication in an ACI journal or in an international journal indexed in ISI, SCOPUS, IEEE, PubMed or Web of Science (at least 1 article is required); or must be published as a full paper in the proceedings of an international academic conference that is accepted in the program (at least 1 article is required). The student must be the first author affiliated with "Master of Science Program in Applied Microbiology (International Program), Faculty of Science, Chiang Mai University)" in the main publication. A granted patent or petty patent can be accepted instead of a published paper.