

# MASTER OF SCIENCE PROGRAM IN MEDICAL TECHNOLOGY INTERNATIONAL PROGRAM/REVISED PROGRAM 2566 B.E.

## PROGRAM

(Thai)                    วิทยาศาสตร์มหาบัณฑิต สาขาวิชาเทคนิคการแพทย์ (หลักสูตรนานาชาติ)  
(English)                Master of Science Program in Medical Technology (International Program)

## DEGREE

- (Thai)  
Full title                : วิทยาศาสตร์มหาบัณฑิต (เทคนิคการแพทย์)  
Abbrev.                 : วท.ม. (เทคนิคการแพทย์)
- (English)  
Full title                : Master of Science (Medical Technology)  
Abbrev.                 : M.S. (Medical Technology)

## DEGREE REQUIREMENTS

Type 2 (Plan A type A2): 36 Credits

## STUDY DURATION

Type 2 (Plan A type A2): 2 Years (4 Semesters), a maximum of 5 years

## PROGRAM STRUCTURE

Degree requirements	a minimum of	36	credits
A. Course Work	a minimum of	24	credits
1. Graduate courses	a minimum of	24	credits
1.1 Field of concentration courses	a minimum of	22	credits
1.1.1 Required courses		14	credits
510711 AMS 711	Laboratory Management and Quality Control		1 credit
510713 AMS 713	Research Methodology and Biostatistics		2 credits
510716 AMS 716	Cell and Molecular Biology in Medicine		4 credits
510720 AMS 720	Techniques for Biomedical Science Research		3 credits
510721 AMS 721	Technology in Health Informatics		2 credits
510722 AMS 722	Molecular Precision Medicine		2 credits

<b>1.1.2 Track's required courses</b> (choose only 1 track)	<b>8 credits</b>
<b>Clinical Microscopy Track</b>	
501701 CMS 701 Advanced Hematology and Clinical Microscopy	4 credits
501702 CMS 702 Current Topics in Hematology and Clinical Microscopy	2 credits
501791 CMS 791 Seminar in Hematology and Clinical Microscopy 1	1 credit
501792 CMS 792 Seminar in Hematology and Clinical Microscopy 2	1 credit
<b>Clinical Chemistry Track</b>	
504701 CCH 701 Advanced Clinical Chemistry	4 credits
504732 CCH 732 Molecular Biochemistry of Diseases	2 credits
504791 CCH 791 Seminar in Clinical Chemistry 1	1 credit
504792 CCH 792 Seminar in Clinical Chemistry 2	1 credit
<b>Clinical Immunology Track</b>	
506701 IMM 701 Advanced Immunology	4 credits
506793 IMM 793 Seminar in Immunology 1	1 credit
506794 IMM 794 Seminar in Immunology 2	1 credit
506795 IMM 795 Current Techniques for Immunological Research and Laboratory	2 credit
<b>Clinical Microbiology Track</b>	
508701 CMB 701 Advanced Clinical Microbiology	4 credits
508732 CMB 732 Special Topics in Clinical Microbiology	2 credits
508791 CMB 791 Seminar in Clinical Microbiology 1	1 credit
508792 CMB 792 Seminar in Clinical Microbiology 2	1 credit
<b>Transfusion Science Track</b>	
512701 TSC 701 Advanced Transfusion Science	4 credits
512702 TSC 702 Red Cell Immunology	2 credits
512791 TSC 791 Seminar in Transfusion Science 1	1 credit
512792 TSC 792 Seminar in Transfusion Science 2	1 credit
<b>1.2 Elective courses</b>	<b>a minimum of 2 credits</b>
select from the following courses	
501741 CMS 741 Case Conference in Hematology and Clinical Microscopy	2 credits
501797 CMS 797 Special Problem in Hematology and Clinical Microscopy	3 credits
508702 CMB 702 Innovations in Clinical Microbiology	2 credits
510719 AMS 719 Laboratory and Clinical Data Correlation	2 credits
510793 AMS 793 Selected Topics in Biomedical Sciences	2 credits

512704	TSC 704	Safe Blood Component Preparation and Management	2 credits
512705	TSC 705	Case Conference in Transfusion Science	2 credits
512706	TSC 706	Quality Management in Transfusion Science	2 credits
512733	TSC 733	Transplantation Immunology	2 credits
512735	TSC 735	Platelet Immunobiology	2 credits
Or other new graduate courses opened within Faculty of Associated Medical Sciences in consent of the program committee			
Or other graduate courses in the field of health sciences or sciences and technology with approval of the advisors			
2. Advanced undergraduate courses			-None-
<b><u>B. Thesis</u></b>			<b>12 credits</b>
510799	AMS 799	Master's Thesis	12 credits

**C. Non-credit course**

- |                                  |                     |
|----------------------------------|---------------------|
| 1. Graduate School's requirement | - foreign language- |
| 2. Program's requirement         | -None-              |

**D. Academic activities**

1. The whole or part of a master's thesis must be published or accepted for publication in a peer reviewed international journal or published in English in TCI Tier 1 journal. At least one publication is required and student must be the first author in at least one of the publications with the affiliation "Master of Science in Medical Technology, Faculty of Associated Medical Sciences, Chiang Mai University  
Or Received a patent/ a patent application number with Readiness Level (TRL/PRL/SRL) of 4 or above, in which student must be the first author with the affiliation of "Master of Science in Medical Technology, Faculty of Associated Medical Sciences, Chiang Mai University"  
Or Innovation work with Readiness Level (TRL/PRL/SRL) of 5 or above, in which student must be the first author with the affiliation of "Master of Science in Medical Technology, Faculty of Associated Medical Sciences, Chiang Mai University"
2. Students have to report their thesis progression to the Graduate Program Administrative Committee every semester.

## STUDY PLAN

- Clinical Microscopy Track

1 <sup>st</sup> year					
Semester 1		Credits	Semester 2		Credits
510711	Laboratory Management and Quality Control	1	510713	Research Methodology and Biostatistics	2
510716	Cell and Molecular Biology in Medicine	4	510722	Molecular Precision Medicine	2
510720	Techniques for Biomedical Science Research	3	501701	Advanced Hematology and Clinical Microscopy	4
510721	Technology in Health Informatics	2	xxxxxx	Elective courses	2
	Pass English test			Present thesis proposal	
<b>Total</b>		<b>10</b>	<b>Total</b>		<b>10</b>

2 <sup>nd</sup> year					
Semester 1		Credits	Semester 2		Credits
501702	Current Topics in Hematology and Clinical Microscopy	2	501792	Seminar in Hematology and Clinical Microscopy 2	1
501791	Seminar in Hematology and Clinical Microscopy 1	1	510799	Master's Thesis	6
510799	Master's Thesis	6		Thesis defense Exam	
<b>Total</b>		<b>9</b>	<b>Total</b>		<b>7</b>

**TOTAL 36 CREDITS**

• Clinical Chemistry Track

1 <sup>st</sup> year					
Semester 1		Credits	Semester 2		Credits
510711	Laboratory Management and Quality Control	1	510713	Research Methodology and Biostatistics	2
510716	Cell and Molecular Biology in Medicine	4	510722	Molecular Precision Medicine	2
510720	Techniques for Biomedical Science Research	3	504701	Advanced Clinical Chemistry	4
510721	Technology in Health Informatics	2	504732	Molecular Biochemistry of Diseases	2
			xxxxxx	Elective courses	2
	Pass English test			Present thesis proposal	
<b>Total</b>		<b>10</b>	<b>Total</b>		<b>12</b>

2 <sup>nd</sup> year					
Semester 1		Credits	Semester 2		Credits
504791	Seminar in Clinical Chemistry 1	1	504792	Seminar in Clinical Chemistry 2	1
510799	Master's Thesis	6	510799	Master's Thesis	6
				Thesis defense Exam	
<b>Total</b>		<b>7</b>	<b>Total</b>		<b>7</b>

**TOTAL 36 CREDITS**

• Clinical Immunology Track

1 <sup>st</sup> year					
Semester 1		Credits	Semester 2		Credits
510711	Laboratory Management and Quality Control	1	510713	Research Methodology and Biostatistics	2
510716	Cell and Molecular Biology in Medicine	4	510722	Molecular Precision Medicine	2
510720	Techniques for Biomedical Science Research	3	506701	Advanced Immunology	4
510721	Technology in Health Informatics	2	506793	Seminar in Immunology1	1
			xxxxxx	Elective courses	2
	Pass English test			Present thesis proposal	
<b>Total</b>		<b>10</b>	<b>Total</b>		<b>11</b>

2 <sup>nd</sup> year					
Semester 1		Credits	Semester 2		Credits
506795	Current Techniques for Immunological Research and Laboratory	2	506794	Seminar in Immunology 2	1
510799	Master's Thesis	6	510799	Master's Thesis	6
				Thesis defense Exam	
<b>Total</b>		<b>8</b>	<b>Total</b>		<b>7</b>

**TOTAL 36 CREDITS**

• Clinical Microbiology Track

1 <sup>st</sup> year					
Semester 1		Credits	Semester 2		Credits
510711	Laboratory Management and Quality Control	1	510713	Research Methodology and Biostatistics	2
510716	Cell and Molecular Biology in Medicine	4	510722	Molecular Precision Medicine	2
510720	Techniques for Biomedical Science Research	3	508701	Advanced Clinical Microbiology	4
510721	Technology in Health Informatics	2	xxxxxx	Elective courses	2
	Pass English test			Present thesis proposal	
<b>Total</b>		<b>10</b>	<b>Total</b>		<b>10</b>

2 <sup>nd</sup> year					
Semester 1		Credits	Semester 2		Credits
508732	Special Topics in Clinical Microbiology	2	508792	Seminar in Clinical Microbiology 2	1
508791	Seminar in Clinical Microbiology 1	1	510799	Master's Thesis	6
510799	Master's Thesis	6		Thesis defense Exam	
<b>Total</b>		<b>9</b>	<b>Total</b>		<b>7</b>

**TOTAL 36 CREDITS**

• Clinical Transfusion Science Track

1 <sup>st</sup> year					
Semester 1		Credits	Semester 2		Credits
510711	Laboratory Management and Quality Control	1	510713	Research Methodology and Biostatistics	2
510716	Cell and Molecular Biology in Medicine	4	510722	Molecular Precision Medicine	2
510720	Techniques for Biomedical Science Research	3	512701	Advanced Transfusion Science	4
510721	Technology in Health Informatics	2	512702	Red Cell Immunology	2
	Pass English test		xxxxxx	Elective courses	2
				Present thesis proposal	
<b>Total</b>		<b>10</b>	<b>Total</b>		<b>12</b>

2 <sup>nd</sup> year					
Semester 1		Credits	Semester 2		Credits
510799	Master's Thesis	6	510799	Master's Thesis	6
512791	Seminar in Transfusion Science 1	1	512792	Seminar in Transfusion Science 2	1
				Thesis defense Exam	
<b>Total</b>		<b>7</b>	<b>Total</b>		<b>7</b>

**TOTAL 36 CREDITS**