MASTER OF SCIENCE PROGRAM IN MEDICAL TECHNOLOGY AND DATA MANAGEMENT

NEW PROGRAM 2568 B.E.

PROGRAM

(Thai) วิทยาศาสตรมหาบัณฑิต สาขาวิชาเทคนิคการแพทย์และการจัดการข้อมูล

(English) Master of Science Program in Medical Technology and Data Management

DEGREE

- (Thai)
  Full title : วิทยาศาสตรมหาบัณฑิต (เทคนิคการแพทย์และการจัดการข้อมูล)
  Abbrev. : วท.ม. (เทคนิคการแพทย์และการจัดการข้อมูล)
- (English)
  Full title : Master of Science (Medical Technology and Data Management)
  Abbrev. : M.S. (Medical Technology and Data Management)

DEGREE REQUIREMENTS

Type 3 (Professional Type): 36 Credits

STUDY DURATION

Type 3 (Professional Type): 2 Years (4 Semesters), a maximum of 5 years

PROGRAM STRUCTURE

Degree requirements	**a minimum of**	**36**	**credits**
A. Course Work	**a minimum of**	**30**	**credits**

1. Graduate courses — **a minimum of 30 credits**

1.1 Field of concentration courses — **a minimum of 30 credits**

1.1.1 Required courses — **12 credits**

510711	AMS 711	Laboratory Management and Quality Control	1 credit
510713	AMS 713	Research Methodology and Biostatistics	2 credits
510720	AMS 720	Techniques for Biomedical Science Research	3 credits
510721	AMS 721	Technology in Health Informatics	2 credits
510723	AMS 723	Data Management in Medical Technology and Public Health	2 credits
676701	PH 701	Principles of Epidemiology	3 credits

1.1.2	**Track's required courses** (choose only 1 track)		**12 credits**
Clinical Microscopy Track			
501703	CMS 703	Blood Cells and Abnormality of Blood Cells	3 credits
501704	CMS 704	Blood Smear Examination for Diagnosis of RBC and Platelet Abnormality	2 credits
501705	CMS 705	Blood Smear Examination for Diagnosis of WBC Abnormality	2 credits
501706	CMS 706	Clinical Significance of Blood Cell Morphology Analysis	1 credit
501707	CMS 707	Case Study in Hematology and Clinical Microscopy	1 credit
501708	CMS 708	Quality Management System of Hematology Laboratory	2 credits
501791	CMS 791	Seminar in Hematology and Clinical Microscopy	1 credit
Genomics and Precision Medicine Track			
510724	GPM 724	Genetics and Human Genome	2 credits
510725	GPM 725	Molecular Precision Medicine	3 credits
510726	GPM 726	Precision Medicine and Application	3 credits
510727	GPM 727	Management System of Genomics and Precision Medicine Laboratory	2 credits
510794	GPM 794	Seminar in Precision Medicine 1	1 credit
510795	GPM 795	Seminar in Precision Medicine 2	1 credit
Transfusion Science Track			
512701	TSC 701	Advanced Transfusion Science	4 credits
512705	TSC 705	Case Conference in Transfusion Science	2 credits
512791	TSC 791	Seminar in Transfusion Science 1	1 credit
512792	TSC 792	Seminar in Transfusion Science 2	1 credit
512707	TSC 707	Management in Transfusion Science	2 credits
512708	TSC 708	Research Methodology and Biostatistics in Transfusion Science	1 credit
512709	TSC 709	Transfusion Reactions and Management	1 credit
1.2 Elective courses		**a minimum of**	**6 credits**
select from the following courses			
501741	CMS 741	Case Conference in Hematology and Clinical Microscopy	2 credits
501742	CMS 742	Urine and Body Fluids	2 credits
501743	CMS 743	Hemostasis and Thrombosis	2 credits
501797	CMS 797	Special Problem in Hematology and Clinical Microscopy	3 credits
506702	IMM 702	Clinical Immunodiagnostics	2 credits

504701	CCH 701	Advanced Clinical Chemistry	4 credits
508702	CMB 702	Innovations in Clinical Microbiology	2 credits
508732	CMB 732	Special Topics 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
512733	TSC 733	Transplantation Immunology	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. Independent study **6 credits**

510798 AMS798 Independent study 6 credits

C. Non-credit course

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

D. Academic activities

1. The student must participate in the seminar activities from the second semester of Year 1 of study plan until graduation.

2. Students must take a comprehensive examination when they have registered for all the courses required by the curriculum and have passed the compulsory courses with a grade not lower than C.

3. Independent study research work or part of an independent study research work must be accepted to be published in an international journal or in national journals listed in the TCI Tier 1 database or in qualified national journals that are recognized in the academic area of the field or related fields of study, when the journal is published continuously and regularly for a period of at least 3 years, the article has undergone review by at least 3 peer reviewers from various institutions outside the university, and the journal is published in print or electronically, with a certain scheduled publication date or must be published in the academic publications which accepted in the field of study and has been approved by the Academic Administration and Development Committee that the student must be listed as the first author of at least 1 independent study research work and clearly indicating affiliation as "Department of Medical Technology, Faculty of Associated Medical Sciences, Chiang Mai University, Chiang Mai, Thailand" in the main publication.

STUDY PLAN

- **Clinical Microscopy Track**

1st year					
Semester 1		Credits	Semester 2		Credits
510711	Laboratory Management and Quality Control	1	510723	Data Management in Medical Technology and Public Health	1
510713	Research Methodology and Biostatistics	2	676701	Principles of Epidemiology	3
510720	Techniques for Biomedical Science Research	3	501791	Seminar in Hematology and Clinical Microscope	1
510721	Technology in Health Informatics	2	xxxxxx	Electives	6
	Pass the foreign language examination requirements			Propose an independent research outline topic	
Total		**8**	**Total**		**11**

2nd year					
Semester 1		Credits	Semester 2		Credits
501703*	Blood Cells and Abnormality of Blood Cells	3	510798	Independent study	6
501704*	Blood Smear Examination for Diagnosis of RBC and Platelet Abnormality	2		Comprehensive test	
501705*	Case Study in Hematology and Clinical Microscopy	2		Independent research exam	
501706*	Clinical Significance of Blood Cell Morphology Analysis	1			
501707*	Case Study in Hematology and Clinical Microscopy	1			
501708*	Quality Management System of Hematology Laboratory	2			
Total		**11**	**Total**		**6**

Note: * indicates courses that are eligible for credit transfer from the specialized short training program in medical technology.

The total number of credits required for the entire program shall be no less than 36 credits.

- **Genomics and Precision Medicine Track**

1st year					
Semester 1		Credits	Semester 2		Credits
510711	Laboratory Management and Quality Control	1	510723	Data Management in Medical Technology and Public Health	1
510713	Research Methodology and Biostatistics	2	676701	Principles of Epidemiology	3
510720	Techniques for Biomedical Science Research	3	510794	Seminar in Precision Medicine 1	1
510721	Technology in Health Informatics	2	xxxxxx	Electives	6
	Pass the foreign language examination requirements			Propose an independent research outline topic	
Total		**8**	**Total**		**11**

2nd year					
Semester 1		Credits	Semester 2		Credits
510724*	Genetics and Human Genome	2	510798	Independent study	6
510725*	Molecular Precision Medicine	3		Comprehensive test	
510726*	Precision Medicine and Application	3		Independent research exam	
510727*	Management System of Genomics and Precision Medicine Laboratory	2			
510795	Seminar in Precision Medicine 2	1			
Total		**11**	**Total**		**6**

Note: * indicates courses that are eligible for credit transfer from the specialized short training program in medical technology.

The total number of credits required for the entire program shall be no less than 36 credits.

- **Transfusion Science Track**

1st year					
Semester 1		Credits	Semester 2		Credits
510711	Laboratory Management and Quality Control	1	510723	Data Management in Medical Technology and Public Health	1
510713	Research Methodology and Biostatistics	2	676701	Principles of Epidemiology	3
510720	Techniques for Biomedical Science Research	3	512791	Seminar in Transfusion Science 1	1
510721	Technology in Health Informatics	2	xxxxxx	Electives	6
512701*	Advanced Transfusion Science	4			
	Pass the foreign language examination requirements			Propose an independent research outline topic	
Total		**12**	**Total**		**11**

2nd year					
Semester 1		Credits	Semester 2		Credits
512705	Case Conference in Transfusion Science	2	510798	Independent study	6
512707*	Management in Transfusion Science	2		Comprehensive test	
512708*	Research Methodology and Biostatistics in Transfusion Science	1		Independent research exam	
512709*	Transfusion Reactions and Management	1			
512792	Seminar in Transfusion Science 2	1			
Total		**7**	**Total**		**6**

Note: * indicates courses that are eligible for credit transfer from the specialized short training program in medical technology.

The total number of credits required for the entire program shall be no less than 36 credits.