

# Ming Chi University of Technology 109 Academic Year International Ph.D. Program in Innovative Technology of Biomedical Engineering and Medical Devices "Engineering Professional Group" Course Schedule

109/06/05 Program course committee reviewed and approved

109/06/12 College course Committee reviewed and approved

109/06/30 School course committee reviewed and approved

	Courses	First Semester		Second Semester		Remarks
		Credits	Hours	Credits	Hours	
Required Courses	Project & Discussion (1)(2)	0	2	0	2	
	Research Paper Study (1)(2)	0	2	0	2	1-on-1 mentoring with the advising professor
	Introduction to Biomedical Engineering	3	3			
	Introduction to Biotechnology			3	3	
	<b>Subtotal</b>	<b>3</b>	<b>7</b>	<b>3</b>	<b>7</b>	
Professional Electives	Medical Device Special Theory	3	3			
	Digital Image Processing Technologies	3	3			
	Embedded System Programming			3	3	
	Medical Electronics			3	3	
	Biosensors	3	3			
	Biomedical Signal Processing			3	3	
	Functional Polymeric Materials			3	3	
	Practice of Microsystems	3	3			
	Precision Injection Molding Technology	3	3			
	Systematic Design of Mechanism	3	3			
	Rehabilitation Product Design			3	3	
	Introduction to Biomechanics			3	3	
	Finite Element Analysis and Application	3	3			
	Computer-Aided Design/Manufacturing	3	3			
Medical Care Device Design			3	3		
	<b>Subtotal</b>	<b>24</b>	<b>24</b>	<b>21</b>	<b>21</b>	
Cross-domain Electives	Medical Device Innovation	3	3			
	Nano/Micro-Engineering Technique			3	3	
	Biotechnology Law			3	3	
	Human Factor Engineering	3	3			
	Innovation, Entrepreneurship and Intellectual Property Management			3	3	
	Introduction to Medical Device Regulation	3	3			
	Marketing and Management	3	3			
	<b>Subtotal</b>	<b>12</b>	<b>12</b>	<b>9</b>	<b>9</b>	

1. Graduation credits: 30 credits (excluding 12 thesis credits). This includes 6 credits for required courses (excluding 12 thesis credits) and 24 credits for elective courses (including professional elective and cross-domain elective courses).
2. 12 thesis credits will be given after passing the doctoral thesis examination.
3. Master's degree courses can be taken during the doctoral program, but these subjects are similar to those that have been taken before the doctoral program and are not counted as graduation credits.
4. Professional elective courses require at least 15 credits, and professional elective courses can be selected across groups.
5. In addition to the listed courses, the cross-domain elective credits can also be based on the expertise of the other institutes of the school or based on related studies of other schools. The cross-domain elective courses can only be up to 9 credits. Cross-domain elective courses are subject to the approval of the professor in order for the credits can be recognized.
6. The threshold for English proficiency graduation: English proficiency test standards must be passed, based on the "International Ph.D. Program in Innovative Technology of Biomedical Engineering and Medical Devices" detailed rules for examining the English ability of doctoral students.
7. All courses are taught in English.