

Ming Chuan University Computer Science and Information Engineering-Graduate Course Outline for all students
entering in 2020

Course	Credits	Hours	first year				second year				Course Code	Note
			Fall		Spring		Fall		Spring			
			class	lab	class	lab	class	lab	class	lab		
Required Courses	Applied English Communication I-II	4	4	2		2						1-semester courses
	Thesis Seminar 1-4	8	8	2		2		2		2		1-semester courses
	The Design and Analysis of Algorithms	3	3	3								
	Software Engineering	3	3			3						
	Subtotal	18	18	7		7		2		2		
Other Elective Course	Research In Technological and Vocational Education	2	2			2						
	Interpersonal Communication Research	2	2	2								
	Research in Educational Psychology	2	2	2								
	Workplace English	2	2					2				
Elective Courses- Networking and Multimedia Program	Advanced Network Intrusion Detection	3	3					3				
	Advanced Computer Networks	3	3	3								
	Digital Image Processing	3	3	3								
	Internet Technology	3	3			3						
	Network Security	3	3			3						
	Multimedia Security	3	3			3						
	Interactive Media Techniques	3	3					3				
	Topics on Image Processing	3	3					3				
	Video Processing	3	3			3						
Elective Courses- Software and Data	Artificial Intelligence	3	3	3								
	Advanced Big Data Analysis	3	3			3						

Engineering Program	Course	Credits	Hours	first year				second year				Course Code	Note
				Fall		Spring		Fall		Spring			
				class	lab	class	lab	class	lab	class	lab		
	Data Mining	3	3			3							
	Advanced Data Mining	3	3					3					
	Fuzzy Systems	3	3			3							
	Intelligent System Design	3	3					3					
	Data Warehouse System	3	3	3									
	Advanced Expert Systems	3	3			3							
	seminar topics in deep learning	3	3	3									
	Advanced Neural Network and Deep Learning	3	3	3									
	Machine Learning and Data Mining	3	3			3							
Total Required Course Credits	Thesis	6											At least three based course from each of the two programs.
	Professional Required Courses	18	18	7		7		2		2			
	The Minimum Credits required for Elective Professional Courses	18											
	Total	36											

Notes:

1. The students need to satisfactorily complete Graduate degree examination rules of the examination and pass the core competencies of their department to be eligible for graduation.
2. The students must fulfill 36 credits by graduation, including 18 required credits
3. The elective courses on this Course Outline may be counted toward total graduation credits by students who entered the university prior to the 2017-8 academic year.
4. Students who choose to take other courses of other departments must be approved by the chairman in advance. Then, the credits of the approved course can be counted as elective credits toward total graduation credits.
5. According to general provisions for study of Ming Chuan University, graduate school students should meet the English proficiency requirement and comply with its enforcement rules in order to graduate.
6. Students should meet the requirements of Ming Chuan University Guidelines for Taking Academic Ethics Education Course prior applying for the Oral Examination for Thesis Plan.