

Ming Chuan University Department of Electronic Engineering Master Program
Course Outline for all students entering in 2007

Course		Credits	Hours	1 st year				2 nd year				Note
				Fall		Spring		Fall		Spring		
				class	lab	class	lab	class	lab	class	lab	
Core Required Courses	English 1、2	4	4	2		2						
	Thesis Seminar 1、2	4	4	2		2						
	English 3、4	4	4					2		2		
	Thesis Seminar 3、4	4	4					2		2		
	Subtotal	16	16	4		4		4		4		
Elective Courses	Semiconductor	Semiconductor physics	3	3	3							
		Solid-state physics	3	3	3							
		Nano-scale MOSFET device physics	3	3	3							
		Integrated circuit engineering	3	3	3							
		Integrated circuit devices	3	3	3							
		Semiconductor measurement techniques	3	3			3					
		Memory devices	3	3			3					
		Advanced integrated process technology	3	3			3					
		Semiconductor reliability engineering	3	3			3					
		ESD protection design for integrated circuit	3	3			3					
	Opto-electronic	Introduction to Optoelectronic device	3	3	3							
		Advanced numerical analysis	3	3	3							
		Modern Optics	3	3	3							
		Opto-Electromagnetics	3	3	3							
		Optical fiber communication science	3	3			3					
		Fourier Optics	3	3			3					
		Flat panel display Technology	3	3			3					
		Optoelectronic measurement technology	3	3			3					
		Opto-Electronics	3	3					3			
		Integrated Optics	3	3					3			
	Microwave	Antenna Engineering	3	3	3							
		RF Circuit Design	3	3	3							
		RF Circuit Design Project	3	3	3							
		Advanced Electromagnetics I	3	3	3							
		Microwave Engineering I	3	3	3							
		Microwave Engineering II	3	3			3					

		Advanced Electromagnetics II	3	3			3						
		Microwave Circuit Design	3	3			3						
		Antenna Project	3	3			3						
		Numerical Electromagnetics	3	3			3						
	IC design and Application	Analog IC layout and simulation	3	3	3								
		ASIC	3	3	3								
		Digital signal processing	3	3	3								
		Analog integrated circuit(IC) design	3	3	3								
		VLSI circuit design	3	3	3								
		Digital video techniques	3	3	3								
		Special topics on electronic circuits	3	3	3								
		Intelligent systems	3	3	3								
		Digital signal compression	3	3	3								
		Analog/Digital hybrid circuit design	3	3				3					
		Advanced analog IC design	3	3				3					
		Advanced VLSI circuit design	3	3				3					
		Analog filter IC design	3	3				3					
		Data conversion IC design	3	3				3					
		Digital signal processing architecture design	3	3				3					
		Switched-capacitance network	3	3				3					
		System on chip design	3	3				3					
		Error correction codes	3	3				3					
		Physiology (I)	3	3	3								
		Introduction to medical engineering	3	3	3								
		Advanced medical instruments	3	3	3								
		Medical image processing	3	3	3								
		Physiology (II)	3	3				3					
	Medical Biotechnology electro optical	3	3				3						
	Remote health care system	3	3				3						
Grand Total	Master Thesis	6											
	Subtotal Required Course Credits	16	16	4			4		4		4		
	Subtotal Elective Course Credits	24											
	Total	46											

Notes:

1. Students can choose other courses of Information College. Non-information courses which students choose are not admitted by our department and cannot be taken as graduation credits if not agreed by the chairman of department..