

Course Structure for Master Program
Department of Mechatronic Engineering National Taiwan Normal University

I.Course Works & Program Requirement

Required Credits	Elective Credits	Total Credits
4	24	28

II.Details about the Course Works

▪ **Required Courses:**

Program Required Courses						
Course-Level	Term	Course Name	Credit	Offered by	Instructor	Note
MA	Fall	<u>Seminar (I)- Master</u>	1	Department of Mechatronic Engineering	<u>Twu, Ming-Jenq</u>	Course Taught in English
MA	Fall	<u>Seminar (II)- Master</u>	1	Department of Mechatronic Engineering	<u>Twu, Ming-Jenq</u>	Course Taught in English
MA	Fall	<u>Seminar (III)- Master</u>	1	Department of Mechatronic Engineering	<u>Teng, Tun-Chien</u>	Course Taught in English
MA	Fall	<u>Seminar (IV)- Master</u>	1	Department of Mechatronic Engineering	<u>Teng, Tun-Chien</u>	Course Taught in English

▪ **Elective Courses:**

Program Elective Courses					
Level	Term	Course Name	Credit	Offered by	Instructor
MA	Fall	<u>Experimental Design Method</u>	3	Department of Mechatronic Engineering	<u>Liu, Chuan-Hsi</u>
MA	Fall	<u>Numerical Analysis</u>	3	Department of Mechatronic Engineering	<u>Twu, Ming-Jenq</u>

MA	Fall	<u>Advanced Engineering Mathematics</u>	3	Department of Mechatronic Engineering	<u>Chen, Chun-Ta</u>
MA	Fall	<u>Opto-Mechatronic Engineering</u>	3	Department of Mechatronic Engineering	<u>To be arranged</u>
MA	Fall	Computer-Aided Mechanism Analysis	3	Department of Mechatronic Engineering	<u>Twu, Ming-Jenq</u>
MA	Fall	Thin Film Engineering and Analysis Technology	3	Department of Mechatronic Engineering	<u>Cheng, Chin-Pao</u>
MA	Fall	Principles and Application of Micro-Electro-Mechanical System	3	Department of Mechatronic Engineering	<u>Yang, Chii-Rong</u>
MA	Fall	Micro Actuators and Sensors Analysis and Design	3	Department of Mechatronic Engineering	<u>Yang, Chii-Rong</u>
MA	Fall	Nano Science and Technology	3	Department of Mechatronic Engineering	<u>Yang, Chii-Rong</u>
MA	Fall	Precision Mechanical System Design and Practice	3	Department of Mechatronic Engineering	<u>Chen, Shun-Tong</u>
MA	Fall	Ultra Precision Machining	3	Department of Mechatronic Engineering	<u>Chen, Shun-Tong</u>
MA	Fall	Analysis and Design of Thermal-Fluid Systems	3	Department of Mechatronic Engineering	<u>Chang, Tien-Li</u>
MA	Fall	Finite Element Analysis	3	Department of Mechatronic Engineering	<u>Twu, Ming-Jenq</u>
MA	Fall	Nano/micro-Thermal-Fluidic Systems	3	Department of Mechatronic Engineering	<u>Chang, Tien-Li</u>
MA	Fall	Semiconductor Fabrication Process	3	Department of Mechatronic	<u>Liu, Chuan-Hsi</u>

				Engineering	
MA	Fall	Vacuum Technology and Application	3	Department of Mechatronic Engineering	<u>Cheng, Chin-Pao</u>
MA	Fall	Applied Optics	3	Department of Mechatronic Engineering	<u>Teng, Tun-Chien</u>
MA	Fall	Linear Control Systems	3	Department of Mechatronic Engineering	<u>Lu, Yu-Sheng</u>
MA	Fall	Robotics	3	Department of Mechatronic Engineering	<u>Chen, Chun-Ta</u>
MA	Fall	Electro-Optical and Systems	3	Department of Mechatronic Engineering	<u>Chang, Gao-Wei</u>
MA	Fall	Servo Control	3	Department of Mechatronic Engineering	<u>Chen, Mei-Yung</u>
MA	Fall	Digital Control Systems	3	Department of Mechatronic Engineering	<u>Lu, Yu-Sheng</u>
MA	Fall	Computer-Aided Optical Design	3	Department of Mechatronic Engineering	<u>Teng, Tun-Chien</u>
MA	Fall	Semiconductor Devices and Physics	3	Department of Mechatronic Engineering	<u>Liu, Chuan-Hsi</u>
MA	Fall	Digital Signal Processing	3	Department of Mechatronic Engineering	<u>Chang, Gao-Wei</u>
MA	Fall	Digital Image Processing	3	Department of Mechatronic Engineering	<u>To be arranged</u>
MA	Fall	Time Frequency Analysis	3	Department of Mechatronic Engineering	<u>Wu, Shuen-De</u>
MA	Fall	Principles of	3	Department of	<u>Teng,</u>

		Electro-Optical Engineering		Mechatronic Engineering	<u>Tun-Chien</u>
MA	Fall	Artificial Intelligence	3	Department of Mechatronic Engineering	<u>To be arranged</u>
MA	Fall	Windows Programming	3	Department of Mechatronic Engineering	<u>Chang, Gao-Wei</u>
MA	Fall	Laser Engineering Technology and Applications	3	Department of Mechatronic Engineering	<u>Teng, Tun-Chien and Chang, Tien-Li</u>
MA	Fall	Object-Oriented Programming	3	Department of Mechatronic Engineering	<u>Wu, Shuen-De</u>
MA	Fall	Modern Control	3	Department of Mechatronic Engineering	<u>Chen, Mei-Yung</u>
MA	Fall	Electromagnetics	3	Department of Mechatronic Engineering	<u>Teng, Tun-Chien</u>
MA	Fall	Stochastic Processes	3	Department of Mechatronic Engineering	<u>Wu, Shuen-De</u>
MA	Fall	Computer Vision	3	Department of Mechatronic Engineering	<u>To be arranged</u>
MA	Fall	Embedded System Design	3	Department of Mechatronic Engineering	<u>Lu, Yu-Sheng</u>
MA	Fall	Thesis of Electric Machinery	3	Department of Mechatronic Engineering	<u>To be arranged</u>