Institute of Mechatronic Engineering
Curriculum Requirements for Enrollees in the Academic Year 113 (Fall 2024)

Program	Master's Program for the Day Division	
Group	None	
Class Type	Regular Class	
Special Program	None	
Curriculum Committee	Department Curriculum	113.05.06
	College Curriculum	113.05.23
	University Curriculum	113.06.03
	Academic Affairs	113.06.03
Graduation Credits /Study Duration	At least 30 credits required (plus 6 thesis credits), with a study period of 1－4 years; actual graduation credits based on the table below.	
Credit Load per Semester	The courses and credits required for each semester are determined by the respective departments (or institutes). However, during the first academic year, the total number of credits per semester must not be fewer than 6 credits and not exceed 18 credits.	
Required and Elective	Credits	Subject Category
Required	8 Credits	Major Requirements (including Thesis)
Elective	22 Credits	Major Elective
Other Regulations		
Remarks	"Computer Course" means computer access is required (computer and internet usage fee).	

First Semester, First Year					Second Semester, First Year				
Course	Course	Course Name	Credits / Hours	Notes	Course	Course	Course Name	Credits / Hours	Notes
Major Required	M0D002	Seminar(1)	1/2		Major Required	M0D004	Seminar(2)	1/2	
Major Elective	M0D801	Advanced Engineering Mathematics	3/3		Major Elective	M0D812	Nontraditional Manufacturing Technology	3/3	
Major Elective	M0D804	Advanced Material Science	3/3		Major Elective	M0D813	Mechatronics	3/3	
Major Elective	M0D806	Digital Control System Analysis and Design	3/3		Major Elective	M0D817	Reverse Engineering	3/3	
Major Elective	M0D808	Computer-Aided Design	3/3		Major Elective	M0D820	Vibration and Noise Control	3/3	
Major Elective	M0D811	Technologica English Writing	3/3		Major Elective	M0D829	Real-Time Control System and Graphical Language	3/3	
Major Elective	M0D833	Advanced Mechanism	3/3		Major Elective	M0D843	Mechanism Design	3/3	
Major Elective	M0D840	Quality Engineering and Management	3/3		Major Elective	M0D844	Mechanics Analysis of Electronic Packaging	3/3	
Major Elective	M0D855	Linear System Theory	3/3		Major Elective	M0D851	Technological English Presentation	3/3	
Major Elective	M0D861	Advanced Heat Transfer	3/3		Major Elective	M0D854	Optical-Electrical Engineering	3/3	
Major Elective	M0D862	Mechanics of Piezoelectricity	3/3		Major Elective	M0D856	Fracture & Failure Analysis	3/3	
Major Elective	M0D875	Advanecd Topics in Environmental Engineering	3/3		Major Elective	M0D858	Mechanics of Composite Materials	3/3	
Major Elective	M0D876	Net Zero Carbon Emissions and Sustainable Environment	3/3		Major Elective	M0D859	Pneumatic & Hydraulic servo system control	3/3	
Major Elective	M0D878	Application of Database Management	3/3		Major Elective	M0D877	Green Resources and Circular Economy	3/3	

Major Elective	M0D879	Digital Signal Processing and Sensor Application	3/3						
Major Elective	M0D880	Finite Element Method	3/3						

First Semester, Second Year					Second Semester, Second Year				
Course	Course	Course Name	Credits / Hours	Notes	Course	Course	Course Name	Credits / Hours	Notes
Major Required	M0D872	Seminar(3)	0/2		Major Required	M0D873	Seminar(4)	0/2	
Major Elective	M0D805	Plasma Engineering	3/3		Major Required	M0D874	thesis	6/6	
Major Elective	M0D809	Introduction to Solid Mechanics	3/3		Major Elective	M0D807	Image Process Technology	3/3	
Major Elective	M0D821	Engineering Numerical Analysis and Application	3/3		Major Elective	M0D814	Fuzzy Control Theory	3/3	
Major Elective	M0D841	Ultrasonic Engineering	3/3		Major Elective	M0D816	System Dynamic Analysis	3/3	
Major Elective	M0D842	Advanced Dynamics	3/3		Major Elective	M0D827	LCD and Plasma Panel Display Theory	3/3	
Major Elective	M0D852	Solar Engineering	3/3		Major Elective	M0D828	Theory of System Identification	3/3	
Major Elective	M0D853	Cooling Technology of Electronic Equipment	3/3		Major Elective	M0D834	Random Mode and Application	3/3	
Major Elective	M0D857	Air-conditioning System Engineering	3/3		Major Elective	M0D845	Cutting Dynamics	3/3	
Major Elective	M0D860	Robotics	3/3		Major Elective	M0D846	Excimer Laser and Microfabrication	3/3	
Major Elective	M0D863	Theory of Plasticity	3/3		Major Elective	M0D847	Design of Heat Exchangers	3/3	
Major Elective	M0D871	Industry Technology R&D Internship	9/18		Major Elective	M0D848	Fuel Cell Technology	3/3	
					Major Elective	M0D849	Advanced Energy Technology and Applications	3/3	
					Major Elective	M0D850	Optimal Control Theory and Application	3/3	