

MUST Curriculum Planning for Undergraduate Students for Academic Years 2026-2029
Department of Mechanical Engineering

1 st year(I15)					2 nd year(I16)					3 rd year(I17)							
	Course	1 st semester		2 nd semester		1 st semester		2 nd semester			1 st semester		2 nd semester				
		Cr.	hr.			Cr.	hr.				Cr.	hr.			Cr.	hr.	
MUST Core Required Courses	Classified general Education	2	2	2	2	MUST Core Required Courses	Classified general Education	2	2	2	2	MUST Core Required Courses	Classified general Education	2	2	2	2
	Physical Education	2	2	2	2		Applied English(III)(IV)	2	2	2	2						
	Applied English(I)(II)	2	2	2	2		Physical Education			2	2						
	Applied Chinese(I)(II)	2	2	2	2												
	Subtotal	8	8	8	8		Subtotal	4	4	6	6		Subtotal	2	2	2	2
School Professional Required Courses	Introduction to Computers and Programming	2	2			School Professional Required Courses	Intelligent Technical and Application	2	2			School Professional Required Courses					
	Introduction to Artificial Intelligence			2	2												
	Calculus (I) (II)	3	3	3	3												
	Physics (I) (II)	2	2	2	2												
	Ethics for Engineers			2	2												
	Subtotal	7	7	9	9		Subtotal	2	2	0	0		Subtotal	0	0	0	0
compulsory courses	Manufacturing Processes	2	2			compulsory courses	Computer Aided Mechanical Drafting	3	3			compulsory courses	Special Topics Practice	1	1	1	1
	Shop Practice (I)(II)	3	3	3	3		Engineering Mathematics	3	3				Material Testing	2	2		
	Mechanical Drawing			3	3		Mechatronics and Practice	2	2				CNC Machine Tools Practice	3	3		
					Basic Mechatronics		3	3			Design of Machine Elements		3	3			
					Mechanics of Materials			3	3								
					Mechanism			3	3								
					Materials of Mechanical Engineering			3	3								
					Mechatronics and Practice			3	3								
					Automatic Control Practice			3	3								
					Applied Mechanics		3	3									
	Subtotal	5	5	6	6		Subtotal	14	14	15	15		Subtotal	9	9	1	1
Elective Courses						Elective Courses					Elective Courses	Intelligent Manufacturing Practice	3	3			
							The Microprocessor Practice	3	3								
							Introduction to Green Technique and Engineering Semiconductor	3	3								
							Manufacturing Process and Equipments	3	3								
							Pneumatics Practice	3	3								
							Plastic Working			3		3					
							Heat Treatment			3		3					
							Surface Engineering			3		3					
							Pneumatic Control Technology			3		3					
							Computer-Aided Design			3		3					
							Robotic Engineering			3		3					
							Computer-Aided Manufacturing			3		3					
							Graphic Language Design			3		3					
							Introduction to Additive Manufacturing			3		3					
							System Integration Practice			3		3					
							Technology in Laser Manufacturing			3		3					
							Mechanical Design and Drawing			3		3					
							Thermodynamics			3		3					
							Precision Instrument and Parts Inspections	3	3								

4 th year(I18)					
	Course	1 st semester		2 nd semester	
		Cr.	hr.	Cr.	hr.
MUST Core Required Courses					
	Subtotal	0	0	0	0
School Professional Required Courses					
	Subtotal	0	0	0	0
compulsory courses					
	Subtotal	0	0	0	0
Elective Courses	Practicum Training	9	9	9	9
	Automatic Optical Inspection Technology	3	3		
	Mold Flow Analysis	3	3		
	Introduction to Nanotechnology	3	3		
	Computer-Aided Engineering	3	3		
	Application of the Measurement Technology	3	3		
	Practice in Solar Thermal Energy	3	3		
	Human Machine Interface (HMI) Practice	3	3		
	Refrigeration Air-Conditioning Technology	3	3		
	The Theory of Inventive Problem Solving	3	3		
	CAD/CAM Practice and Application	3	3		
	Practices of Interdisciplinary Creativity	3	3		
	Creative Design of Mechanical Devices			3	3
	Computer-Aided Mold Design			3	3
	Practice of Automatic Precision Machinery Design			3	3
	Theory and Practice of Mechanical Vibrations			3	3
	Techniques in multi-axis machine tool			3	3

Cr./hr. =Credit/hour

Remarks:

1. Minimum graduation credits: 128 credits; Compulsory credits: 98 credits. Elective credits: 30 credits (elective credits include inter-departmental elective credits); the elective credits for majors in the department must not be lower than 18 credits.
2. In the first three years, students must take 16-30 credits per semester, and 9-30 credits per semester in the 4th year.
3. Elective courses are subject to change if necessary.
4. Please implement according to the school's "Implementation Measures for Students' Basic Abilities and Graduation Thresholds".
5. Students should take off-campus internship courses, and the relevant measures are handled in accordance with the Implementation of Off-campus Internship Teaching for Students in the Department of Mechanical Engineering.
6. Students having graduated from a foreign country, including Hong Kong and Macau, with the equivalent of the second year of high school study of the ROC's high school sophomore level, or with a high school equivalent degree, need to take 140 credits.
The program can be extended up to 3 academic years.
7. This form created in 2026/3/13.

明新學校財團法人明新科技大學
機械工程系課程規劃委員會

機械系梁若暉
秘書委員

機械工程系鄒國益
主任

工程學院張合
院長