

Department of Mechanical Engineering
Curriculum Requirements for Enrollees in the Academic Year 114 (Fall 2025)

Program	Four-year technical college program of the Day Division		
Group	None		
Class Type	Regular Class		
Special Program	None		
Curriculum Committee	Department Curriculum	114. 04. 09 ; 115. 04. 09 ; 115. 09. 09	
	College Curriculum	114. 05. 16 ; 115. 05. 19 ; 115. 09. 11	
	University Curriculum	114. 06. 09 ; 115. 06. 01 ; 115. 09. 21	
	Academic Affairs	114. 06. 09 ; 115. 06. 01 ; 115. 09. 21	
Graduation Credits /Study Duration	At least 128 credits required (normally 4 years).		
Credit Load per Semester	Students in Grades 1 and 2 must take no fewer than 16 credits and no more than 28 credits per semester. Students in Grades 3 and 4 must take no fewer than 9 credits and no more than 25 credits per semester.		
Required and Elective	Credits	Subject Category	Credits
Required	80 Credits	General Education	20 Credits
		Major Required	58 Credits
		College Major	2 Credits
Elective	48 Credits	General Education Liberal Arts Elective	8 Credits
		Major Elective	40 Credits
		College professional selective courses	0 Credits
Graduation	Course Title	Description	Regulations/Notes
Cross-disciplinary Credit Courses	Cross-disciplinary Program Learning(0/1)	Students must complete at least one (micro) credit program offered by their respective college before graduation, or a (micro) credit program from another college with the approval of their own college.	1. Regulations for the Establishment of Credit Programs
Cross-disciplinary Credit Program	Digital Technology Micro-Credit Program Learning(0/1)	A Micro-Credit Program in Digital Technology offered by the student's respective college	2. Guidelines for the Implementation of Interdisciplinary (Micro) Credit Programs

English Certificate	English Proficiency Test(0/2)	Students must pass the General English Proficiency Test (GEPT) Basic Level (or equivalent) during their studies.	1. Principles for the Implementation of English Courses and English Proficiency Graduation Requirements
Professional Certification	Professional	Students must obtain at least one relevant professional certificate during their studies.	Regulations of Each Department
Off-campus internship	In accordance with the regulations of each department	In accordance with the regulations of each department	In accordance with the University's Regulations for Student Off-Campus Internships and the relevant regulations of each department
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Other Regulations	通識基礎必修：共同教育課程實施辦法 通識博雅選修：包含四大領域 系相關規定及辦法：技優生需完成技優進階課程，（“▲”代表數控工具機與電腦輔助進階實作課程）。 跨系選修至多採認10學分。		
Remarks	"Computer Course" means computer access is required (computer and internet usage fee). Graduation Requirements: 「G01」: Cross-disciplinary Credit Program: Cross-disciplinary Learning 「G02」: Cross-disciplinary Credit Program: Digital Technology Micro Program 「G03」: English Proficiency Certificate 「G05」: Professional Certificate 「G06」: Off-campus Internship 「G06」: Off-campus Internship 「G06」: Off-campus Internship Course Notes: 「T06」: Advanced Technical Skill Course		

First Semester, First Year					Second Semester, First Year				
Course Category	Course Number	Course Name	Credits/	Notes	Course Category	Course Number	Course Name	Credits/	Notes
General Education Core Required	496804	Literary Appreciation and Expression	2/2		General Education Core Required	496904	Practical Chinese	2/2	
General Education Core Required	492001	English(1)	2/2		General Education Core Required	492002	English (II)	2/2	
General Education Core Required	4912C0	Physical Education(1)	2/2		General Education Core Required	4912D0	Physical Education(2)	2/2	
General Education Core Required	490304	Community Service & Learning(1)	0.5/1		General Education Core Required	490404	Community Service & Learning(2)	0.5/1	
General Education Liberal Arts Elective	497A00	General Courses (I)	2/2		General Education Liberal Arts Elective	497B00	General Courses (II)	2/2	
Major Required	404101	Computational Thinking and Creative Programming	3/3	Computer Course	Major Required	404106	Calculus(2)	3/3	
Major Required	404102	Calculus(1)	3/3		Major Required	404107	Physics(2)	3/3	
Major Required	404103	Physics(1)	3/3		Major Required	404108	Laboratory of Physics	2/2	
Major Required	404104	Chemistry	3/3		Major Required	404109	Statics	3/3	
Major Required	404105	Mechanical Workshop Practice	3/3		Major Required	404110	Mechanical Engineering Drawing and Practice	3/3	
23.5 Credits, 24 Hours					22.5 Credits, 23 Hours				
First Semester, Second Year					Second Semester, Second Year				
Course Category	Course Number	Course Name	Credits/	Notes	Course Category	Course Number	Course Name	Credits/	Notes
General Education Core Required	496404	Contemporary Taiwan and Modern World	2/2		General Education Core Required	496504	Human Rights and Legal	2/2	
General Education Core Required	492003	English(III)	2/2		General Education Liberal Arts Elective	497D00	General Courses (IV)	2/2	
General Education Liberal Arts Elective	497C00	General Courses(III)	2/2		Major Required	404115	Mechanics of Materials	3/3	
Major Required	404111	Programming Language	3/3	Computer Course	Major Required	404118	Pneumatic Control and Practice	3/3	
Major Required	404114	Computer aided drawing and Practice	3/3	Computer Course	Major Required	404126	Advanced Engineering(1)	3/3	
Major Required	404125	Dynamics	3/3		Major Elective	404P06	Computer-aided Manufacturing and Practice	3/3	Computer Course T06
Major Elective	404P01	Numerical Control Machining and Practice	3/3	T06	Major Elective	404P07	Thermodynamics	2/2	
Major Elective	404P02	Electric Circuits and Practice	3/3		Major Elective	404P08	Applied Electronics and Practice	3/3	
Major Elective	404P03	Creative Training	2/2		Major Elective	404P10	Material Science and Laboratory	3/3	

Major Elective	404P04	Introduction to Intelligent Machinery.	2/2		Major Elective	404P11	Mechanism of Machines	2/2	
Major Elective	404P05	Material Science and Engineering	2/2		Major Elective	404P61	Graphics Program Design and Virtual Instrumentation	3/3	
					Major Elective	404P67	Introduction of CNC Machine Design	3/3	
					Major Elective	404P69	Artificial Intelligence	2/2	
27 Credits, 27 Hours					34 Credits, 34 Hours				
First Semester, Third Year					Second Semester, Third Year				
Course Category	Course Number	Course Name	Credits/	Notes	Course Category	Course Number	Course Name	Credits/	Notes
Major Required	404I19	Computer-Aided Design and Practice	3/3	Computer Course	Major Required	404I21	Special Topics	2/2	
Major Required	404I20	Control System Engineering	3/3		Major Elective	404P25	Mechatronics	3/2	
Major Required	404I24	Design of Machine Elements	2/2		Major Elective	404P26	Five-axis Numerical Control Machining and Practice	3/3	T06
Major Elective	404P13	Precision Measurement and Inspection Practice	3/3	T06	Major Elective	404P27	Adjustive and Corrective Technique for CNC Machine	3/3	T06
Major Elective	404P14	Five-axis machining principle and practice	3/3	T06	Major Elective	404P28	Reverse Engineering and Practice	3/3	
Major Elective	404P15	Programming Controller Application and Practice	3/3		Major Elective	404P29	Intelligent Manufacturing Technology	3/3	
Major Elective	404P16	Manufacturing Network Integration Technology	3/3		Major Elective	404P30	Sensor Theory & Applications	2/2	
Major Elective	404P17	Technology of CNC Machine Design	2/2		Major Elective	404P31	Computer-Aided Control System Analysis and Design	3/3	Computer Course
Major Elective	404P18	Kinematics of Machines	2/2		Major Elective	404P32	Thermodynamics and Practice	2/2	
Major Elective	404P19	Manufacturing Engineering	2/2		Major Elective	404P33	Professional Counseling	2/2	
Major Elective	404P20	Heat Treatment	2/2		Major Elective	404P34	Microcomputer Interfacing Practice	3/3	
Major Elective	404P21	Vibration Theory and Applications	2/2		Major Elective	404P35	Non-Destructive Inspection	2/2	
Major Elective	404P22	Fluid Dynamics and Practice	2/2		Major Elective	404P36	Machining technology and practice of CNC tool machine (1)	2/2	
Major Elective	404P23	Personal and Professional Ethics	2/2		Major Elective	404P62	Engineering Reliability	3/3	
Major Elective	404P24	Design and Manufacturing for Precision Optical Component	3/3		Major Elective	404P68	Ultra Precision Machining	3/3	
37 Credits, 37 Hours					39 Credits, 38 Hours				

First Semester, Fourth Year					Second Semester, Fourth Year				
Course Category	Course Number	Course Name	Credits/	Notes	Course Category	Course Number	Course Name	Credits/	Notes
General Education Core Required	492246	English Proficiency qualification	1/N	G03	College Major Required	40TNJ9	Interdisciplinary Credit Program Learning	1/1	G01
Major Elective	404P37	Summer Off-campus Internship	3/3	G06	College Major Required	40TNK1	Engineering Digital Technology Micro-Credit Program Learning	1/1	G02
Major Elective	404P38	Semester off-campus internship (1)	9/9	G06	Major Required	404I27	Professional Certification Preparation	1/N	G05
Major Elective	404P39	Five-axis Compound Machining and Practice	3/3		Major Elective	404P50	Semester off-campus internship (2)	9/9	G06
Major Elective	404P40	Non-traditional Manufacturing	2/2		Major Elective	404P51	Opto-Mechatronics Systems	2/2	
Major Elective	404P41	Welding Engineering and Practice	2/2		Major Elective	404P52	Plastic Working	2/2	
Major Elective	404P42	Introduction to Semiconductor Manufacturing Technology	2/2		Major Elective	404P53	Engineering Statistics and Quality Management	2/2	
Major Elective	404P43	Computer-Aided Engineering Analysis	3/3	Computer Course	Major Elective	404P54	Nano Engineering and Applications	2/2	
Major Elective	404P44	Principles of Electro-Motor and Applications	2/2		Major Elective	404P55	CNC Machine Design and Analysis	2/2	
Major Elective	404P45	Heat Engine Engineering and Applications	2/2		Major Elective	404P56	Air-Conditioned Engineering	2/2	
Major Elective	404P46	Industrial Management	2/2		Major Elective	404P57	Introduction of Electronics Cooling Technology	2/2	
Major Elective	404P47	Intelligent Manufacturing Topics	3/3		Major Elective	404P58	English for Engineering	2/2	
Major Elective	404P48	Principles and Application of Robotic Arm	2/2		Major Elective	404P59	Dynamic System Feedback Control Analysis	3/3	
Major Elective	404P49	Machining technology and practice of CNC tool machine (2)	2/2		Major Elective	404P60	Machining technology and practice of CNC tool machine (3)	2/2	
Major Elective	404P63	Numerical Analysis	3/3		Major Elective	404P65	Cyber-Physical Systems	3/3	
Major Elective	404P64	Digital Signal Processing and Sensor Application	3/3		Major Elective	404P66	Big data analytics and machine learning	3/3	
					Major Elective	404P70	Proficiency Assessment of Mechanical and Mechatronic Technology	3/3	
44 Credits, 43 Hours					42 Credits, 41 Hours				