

Department of Mechanical Engineering

Curriculum Requirements for Enrollees in the Academic Year 110 (Fall 2021)

Program	Four-year technical college program of the Day Division								
Group	Mechanical and Electrical Group								
Class Type	Regular Class								
Special Program	None								
Curriculum Committee	Department Curriculum		110.05.07						
	College Curriculum		110.06.01						
	University Curriculum		110.06.07						
	Academic Affairs		110.06.07						
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	87 Credits		General Education		16 Credits				
			Major Required		71 Credits				
			College Major		0 Credits				
Elective	41 Credits		General Education		8 Credits				
			Major Elective		33 Credits				
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
General Education	404001	Chinese (1)	2/2		General Education	404011	Chinese (2)	2/2	
General Education	400E00	English(I)	2/2		General Education	400F00	English(II)	2/2	
General Education	404102	Community Service & Learning(1)	0/1		General Education	404103	Community Service & Learning(2)	0/1	
General Education	400A00	physical education (1)	1/2		General Education	400B00	physical education (2)	1/2	
General Education	300A00		2/2		General Education	300B00	General Courses (II)	2/2	
Major Required	404C03	Physics(1)	3/3		Major Required	404064	Human Rights and Legal Education	2/2	
Major Required	404C01	Calculus (1)	3/3		Major Required	404C04	Physics(2)	3/3	
Major Required	404C60	Introduction and Practice of Mechanical Engineering	2/3		Major Required	404C05	Physics and Laboratory	1/2	
Major Required	404C06	Chemistry	3/3		Major Required	404C02	Calculus(2)	3/3	
Major Required	404079	Computational Thinking and Creative Programming	2/3	Computer Course	Major Required	404C11	Statics	3/3	
Major Required	404056	Labor education (1)	0/1		Major Required	404057	Labor education (2)	0/1	

Major Required	404052	All-out Defense Education Military Training – International Situations	0/2		Major Required	404053	All-out Defense Education Military Training –Defense Mobilization	0/2	
20 Credits, 27 Hours					19 Credits, 25 Hours				
First Semester, Second Year					Second Semester, Second Year				
Course	Course	Course Name	Credits / Hours	Notes	Course	Course	Course Name	Credits / Hours	Notes
General Education	400G00	English(III)	2/2		General Education	400H00	English (IV)	2/2	
General Education	400C00	Physical Education (III)	1/2		General Education	400D00	physical education (4)	1/2	
General Education	300C00		2/2		General Education	300D00	General Courses (IV)	2/2	
Major Required	404068	Contemporary Taiwan and Modern World	2/2		Major Required	404065	Practical Chinese	2/2	
Major Required	404C12	Engineering Mathematics(1)	3/3		Major Required	404C17	Mechanics of Materials(2)	2/2	
Major Required	404C14	Dynamics	3/3		Major Required	404C38	Thermodynamics	2/2	
Major Required	404C16	Mechanics of Materials(1)	2/2		Major Required	404C62	Applied Electronics and Practice	2/3	
Major Required	404C61	Electric Circuits and Practice	2/3		Major Required	404C71	Control System Engineering	3/3	
Major Required	404C69	C Language	2/3	Computer Course	Major Required	404C72	Sensor Theory & Applications	2/2	
Major Required	404C70	Logic Design and Practice	2/3		Major Elective	404Q34	Computer Aided Drawing	2/3	Computer Course
Major Elective	404Q15	Creative Training	2/2		Major Elective	404Q35	Advanced Numerical Machine Control and Practice	2/2	
Major Elective	404Q32	Mechanical Engineering Drawing	2/3		Major Elective	404Q37	Material Science and Laboratory	2/3	
Major Elective	404Q33	Material Science	2/2		Major Elective	404Q88	Engineering Mathematics(2)	3/3	
27 Credits, 32 Hours					27 Credits, 31 Hours				
First Semester, Third Year					Second Semester, Third Year				
Course	Course	Course Name	Credits / Hours	Notes	Course	Course	Course Name	Credits / Hours	Notes
Major Required	404C39	Fluid Dynamics and Practice	2/2		Major Required	404C75	Programming Controller Application and Practice	2/2	
Major Required	404C64	Pneumatic Control and Practice	2/3		Major Required	404C77	Mechatronics	2/2	
Major Required	404C74	Microcomputer Interfacing Practice	2/3		Major Required	404C78	Graphics Program Design and Virtual Instrumentation	2/3	
Major Elective	404Q04	Principle of Machine Design	2/2		Major Required	404C79	Special Topics	2/4	
Major Elective	404Q06	Heat Treatment	2/2		Major Elective	404Q10	Computer-Aided Engineering Analysis	3/3	Computer Course
Major Elective	404Q07	Personal and Professional Ethics	2/2		Major Elective	404Q24	Non-Destructive Inspection	2/2	
Major Elective	404Q36	Kinematics of Machines	2/2		Major Elective	404Q42	Introduction of CNC Machine Design	2/2	
Major Elective	404Q38	Principles of Electro-Motor	2/2		Major Elective	404Q43	Thermodynamicsand Practice	2/2	
Major Elective	404Q40	Vibration Theory and Applications	2/2		Major Elective	404Q44	Career Guidance and Counseling	2/2	

Major Elective	404Q73	Computer-Aided Manufacturing and Practice	2/3		Major Elective	404Q74	Precision Measurement and Practice	2/3	
Major Elective	404Q84	Computer-Aided Control System Analysis and Design	3/3		Major Elective	404Q83	Manufacturing Engineering	2/2	
23 Credits, 26 Hours					23 Credits, 27 Hours				
First Semester, Fourth Year					Second Semester, Fourth Year				
Course	Course	Course Name	Credits / Hours	Notes	Course	Course	Course Name	Credits / Hours	Notes
General Education	404039	English Proficiency qualification	0/2		College Major	40TND9	Interdisciplinary program learning	0/1	
Major Elective	404Q01	Industrial Management	2/2		College Major Required	40TNF1	Interdisciplinary Micro Course Program for Engineering Digital Technology	0/1	
Major Elective	404Q12	Non-traditional Manufacturing	2/2		Major Required	404C80	Proficiency Assessment of Mechanical and Mechatronic Technology	3/3	
Major Elective	404Q18	Computer-Aided Design	3/3	Computer Course	Major Elective	404Q23	Reverse Engineering	2/2	
Major Elective	404Q20	Introduction to Semiconductor Manufacturing Technology	2/2		Major Elective	404Q29	Air-Conditioned Engineering	2/2	
Major Elective	404Q46	Technology of CNC Machine Design	2/2		Major Elective	404Q49	Opto-Mechatronics Systems	2/2	
Major Elective	404Q47	Welding Engineering and Practice	2/2		Major Elective	404Q50	Engineering Statistics and Quality Management	2/2	
Major Elective	404Q48	Heat Engine Engineering and Application	2/2		Major Elective	404Q51	Plastic Working	2/2	
Major Elective	404Q79	Labview Designs and Practices of Virtual Instrument	3/3		Major Elective	404Q52	CNC Machine Design and Analysis	2/2	
Major Elective	404Q81	Intelligent practice of production line (1)	3/3		Major Elective	404Q53	Nano Engineering and Applications	2/2	
Major Elective	404Q86	Principles and Application of Robotic Arm	2/2		Major Elective	404Q54	Introduction of Electronics Cooling Technology	2/2	
					Major Elective	404Q78	Dynamic System Feedback Control Analysis	3/3	
					Major Elective	404Q80	English for Engineering	2/2	
					Major Elective	404Q82	Intelligent practice of production line (2)	3/3	
					Major Elective	404Q87	Semester Off-campus Internship	9/9	
23 Credits, 25 Hours					36 Credits, 38 Hours				