## Department of Mechanical Engineering

Curriculum Requirements for Enrollees in the Academic Year 112 (Fall 2023)

Prog	gram	Four-year technical co	llege	progr	am of the I	Day Divisio	n				
Gro	oup	Mechanical and Electrical Group									
Class	Туре	Regular Class									
Special	Program	None									
Curriculum Committee		Department Curriculum 112.04.18									
		College Curriculum	112. 05. 17								
		University Curriculum	112. 05. 29								
		Academic Affairs	112. 05. 29								
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 an	d Elective	Credits	Subject Category			Credits					
			Gen	eral I	Education	22 Credits					
Requ	ired	87 Credits		Major Requi		65 Credits					
			C	College	Major	0 Credits					
D.I.	. •	41.0.111	General E		Education	ducation 8 Credits					
Elec	tive	41 Credits	Major El		ective		33 Credits	33 Credits			
Other Reg	gulations										
Rema	ırks	"Computer Course" mean	ıs com	puter	access is 1	required (c	omputer and internet us	sage f	ee).		
	First Se	emester, First Year		Second Semester, First Year							
Course	Course	Course Name	Credits Hours	Notes	Course	Course	Course Name	Credits / Hours	Notes		
General Education	496104	Chinese(1)	2/2		General Education	496204	Chinese(2)	2/2			
General Education	492001		2/2		General Education	496504	Human Rights and Legal	2/2			
General Education	4912A0	physical education (1)	1/2		General Education	492002	English (II)	2/2			
General Education	490104	Community Service and Learning(1)	0/1		General Education	4912B0	physical education (2)	1/2			
General Education	497A00		2/2		General Education	490204	Community Service and Learning(2)	0/1			
Major Required	404C03	Physics(1)	3/3		General Education	497B00		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	Compu ter Cours e	Major Required	404C11	Statics	3/3			
20 Credits, 24 Hours						19 (	Credits, 22 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	496404	Contemporary Taiwan and Moder World	2/2		General Education	496304	Practical Chinese	2/2		
General Education	492003	English(III)	2/2		General Education	492004	English (IV)	2/2		
General Education	4913C0	physical education (3)	1/2		General Education	4913D0	physical education (4)	1/2		
General Education	497C00		2/2		General Education	497D00		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	Compu ter Cours e	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	Compu ter Cours e	
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			
		Semester, Third Year					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	Compu ter Cours e	
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							

23 Credits, 26 Hours First Semester, Fourth Year					21 Credits, 25 Hours					
					Second Semester, Fourth Year					
Course	Course	Course Name	Credits Hours	Notes	Course	Course	Course Name	Credits / Hours	Notes	
General Education	492104	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	Compu ter Cours e	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			