

National Pingtung University of Science and Technology

Academic Year 2019, Four-Year Program, Department of Mechanical Engineering

Academic Year		1st Academic Year						2nd Academic Year					
Semester		1st semester			2nd semester			1st semester			2nd semester		
Course Type		Courses	Code	Credits/ Hours	Courses	Code	Credits/ Hours	Courses	Code	Credits/ Hours	Courses	Code	Credits/ Hours
Required Courses	University	Physical Education(1)	01333	1/2	Physical Education(2)	01334	1/2	Physical Education	01206	1/2	Lectures on General Education(註 3)	01024	1/2
		General Education	01026	2/2	General Education	01026	2/2	General Education	01026	2/2	Physical Education	01206	1/2
		Student Life Service	01004	0/2	Student Life Service	01004	0/2				General Education	01026	2/2
		Education			Education						Constitution	01027	2/2
		English Listening & Speaking Practice101	01017	1/2	English Listening & Speaking Practice102	01018	1/2						
		Foreign Language Proficiency Test(註 2)	01003	0/0	Chinese(2)	01088	2/2						
		Chinese(1)	01023	2/2	Freshman English(2)	01087	2/2						
		Freshman English(1)	01001	2/2									
	College	General Physics(1)	05022	3/3	Calculus(1)	05026	3/3				Special Projects(1)	22367	0/2
		General Physics Lab.(1)	05023	1/2	General Chemistry(1)	05020	3/3						
		Computational Thinking and Information Technology Applications	05081	0/2	General Chemistry Lab.(1)	05021	1/2						
	Department	Fundamental mathematics	22222	3/3	General Physics(2)	20777	3/3	Engineering Mathematics(1)	20040	2/2	Manufacturing Processes and Systems	21570	3/3
		Practical Training in Factory	20048	1/2	Applied Mechanics	23068	3/3	Application Electronics Lab.	22390	3/4	Automatic Control Lab.	22391	3/4
		Computer-Aided Mechanical Drawing	21544	3/3	Computer Programming Language and Practice	23043	3/4	Mechanics of Materials	40306	3/3	Elements of Mechanism(1)	22392	3/4
								Materials of Engineering	20036	3/3	Precision Measurement of internship	21057	2/3
								Fundamental Experiments in Materials	21350	1/2	Introduction of Thermal Engineering	23069	3/4
Sub-Total				19/27			24/30			15/18			20/28
Elective Courses					Engineering Graphics and Practice	22397	2/3	Dynamics	20653	3/3	Mechanical Vibration	21131	3/3
								Literature	21298	2/2	Introduction to Energy	22396	3/3
					Advanced Practical Training in Factory	22398	1/2	Computer Numerically Controlled Machine Tools		3/3	The Techniques of Automatic Engineering	20307	3/3
								Practice of Computer Numerically Controlled Machine Tools	21557	1/2	Advanced computer numerical controlled machine tools internship		3/4
								Thermal and Fluid Mechanics Lab.			Engineering Mathematics		3/3
											Graphical controlling software for design and application(1)		3/4
											Robotics		3/3
Sub-Total						3/5				10/12			21/23

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Academic Year 2019, Four-Year Program, Department of Mechanical Engineering

Academic Year		3rd Academic Year						4th Academic Year						Credits Total
Semester		1st semester			2nd semester			1st semester			2nd semester			
Course Type		Courses	Code	Credits/ Hours	Courses	Code	Credits/ Hours	Courses	Code	Credits/ Hours	Courses	Code	Credits/ Hours	
Required Courses	University	General Education	01026	2/2	General Education	01026	2/2							
	College	Special Projects(2)	22367	1/2	Special Projects(2) Ethics in Engineering	22368 05067	1/2 1/2							
	Department	Elements of Mechanism(2) Computer Aided Fluid Mechanics and Practice	22393 22395	3/4 3/4				Internship(4.5 months)	20584	9/18	Internship(4.5 months)	20584	9/18	
Sub-Total				9/12			4/6			9/18			100	
Elective Courses		The Technique of Chip Packaging and Inspection	20480	3/3	Factory Management	21290	3/3	Computer Aided Mechanical	23087	3/4	Off-campus internship	22818	9/18	
		Introductions to Microchip Fabrication	20151	3/3	Introduction to Biomedical Engineering	20200	3/3	Structural Analysis			Polymer Science and Engineering	20643	3/3	
		Computer-Aided Mold Design and Practice	22409	3/3	Practice of Computer Aided Engineering	22403	3/4	Mechatronics	23088	3/3	The concept of automatic technique	22978	2/2	
		The theory and preparing technology of solar cells	23074	3/3	Flexible Electronics Process	22632	3/3	Mechatronics and lab	23089	1/2				
		Application of MATLAB to Numerical Analysi	23075	3/4	Micro/Nano Manufacturing technology	22416	3/3	Applications of Smart Sensors	22988	1/1				
		Intelligence Control	23076	3/3	Machine Vision technology and application	21133	3/3	for Robotic Arm(微 型)						
		Graphical Controlling	23073	3/4	Mechanical Behaviors of Materials	20343	3/3	Introduction to Machine Vision	M0052	0.5				
		Software for Design and Application(2)			Multi-Axis CNC Machining Technology and Practicing (2)	23078	3/4	for Robotic Arm(微 型)	M0053	0.5				
		Multi-axis CNC machining technology and practicing(1)	23077	3/4	Green Innovative Design	23082	3/3	The Techniques and Practices of Robot Arm Assembly						
		Concepts of Modern Physics	20445	3/3	CPLD Digital Electronics and Practice	23083	3/4	Operation(微 型)		0.5				
		Fixture-Jig Design and Manufacturing aboratory(1)	23084	3/4	Fixture-Jig Design and Manufacturing	23085	3/4	The Techniques and Practices of Robot Arm Applied to the Deep Processing of Agricultural Products(微 型)	M0054					
		Programmable Controller	20154	3/3	Aboratory(2)			The Techniques of Robot Arm (深碗課程)	M0055	0.5				
		Practice of Programmable Controller	20155	1/2	Programmable Logic Controller internship	23086	3/4	Artificial Intelligence						
		Control System Design and Practice for Robotic Manipulators(特色)	23265	3/3	Mechatronics Integration	55146	3/3	Application in Robotic Arm						
		Mechanism Design in Robot (特色)	F0082	2/2	Practice of Mechatronics Integration	55147	1/2	Artificial Intelligence	22985	1/2				
		Mechanism Design Practice in Robot(特色)	F0083	1/2	The Techniques of Robot Arm	F0076	3/3	Application in Robotic Arm Practices						
					The Techniques Practices of Robot Arm	F0077	1/2							

Notes:

1. The minimum credits for graduation are 128, including 100 required credits and 28 elective credits for undergraduate students, respectively.
2. The course “Foreign Language Proficiency Test” will be offered every semester, and students have to follow the regulation of the course and pass it before graduation.
3. Students have to take “Lectures on General Education” (one credit) before graduation. These lectures are offered irregularly, depending on the order of department.
4. Students have to take “General Education” courses, including two courses regarding “Humanities” , three courses regarding “Social Science” and one course regarding “Nature and Life Science” .