114學年度先進科技全英語外國學生專班四年制專業必修科目課程規劃表

List of 4-Year Bachelor's Degree Compulsory Courses, Department of <u>IATP</u>, Academic Year <u>114</u>

中英文科目名稱 Course Title	1		第一學年 1 st Year		第二學年 2 nd Year		第三學年 3 rd Year			備註 Notes (選課須知等 注意事項)
		L 1st semester	T 2 nd semester	L 1st semester	F 2 nd semester	L 1st semester	T 2 nd semester	L 1st semester	T 2 nd semester	
微積分(上)										
Calculus (I)	4	4								
微積分(下)										
Calculus (II)	4		4							
物理(上)										
Physics (I)	3	3								
物理(下)										
Physics (II)	3		3							
化學(上)										
Chemistry (I)	3	3								
化學(下)										
Chemistry (II)	3		3							
物理實習(上)										
Physics Lab. (I)	1	1								
物理實習(下)										
Physics Lab. (II)	1		1							
化學實習(上)										
Chemistry Lab. (I)	1	1								
化學實習(下)										
Chemistry Lab. (II)	1		1							
工程概論及倫理										
Introduction to Engineering and	2	2								
Engineering Ethics										
										Students who do
 初階數學(一)										not pass
Basics of Mathematics (I)	0	0								Entry-level Math
Dasies of Manicillaties (1)										Test need to take
	1									this course.
11.161 24 25										Only chemical
材料科學(一)	3	3								and materials
Materials Science (I)										major students
		<u> </u>								need to take it.

材料科學(二) Materials Science (II)	3	3					Only chemical and materials major students need to take it.
圖學 Graphics	2	2					Only mechanical major students need to take it.
静力學 Statics or 工程静力學 Engineering Statics	3	3					Only mechanical and civil major students need to take it.
工程數學(一) Engineering Mathematics (I)	3		3				
工程數學(二) Engineering Mathematics (II)	3			3			
程式語言 Programming Language	3		3				
材料力學 Mechanics of Materials	3		3				Only mechanical, civil, and materials major students need to take it.
工程動力學 Engineering Dynamics or 動力學 Dynamics	3		3				Only mechanical and civil major students need to take it.
工程材料 Engineering Materials or 工程材料(一) Engineering Materials (1)	3		3				Only mechanical and civil major students need to take it.
熱力學 Thermodynamics	3		3				Only mechanical major students need to take it.
機械實習(一)-材料與製造領域 Mechanical Lab (I)-Materials and Manufacturing	1		1				Only mechanical major students need to take it.
機動學 Mechanisms and Dynamics of Machinery	3			3			Only mechanical major students need to take it.
應用電子學 Applied Electronics	3			3			Only mechanical major students

	<u> </u>				1	l		
								need to take it.
44 进 斑								Only civil major
結構學 Ctrostoral Analysis	3			3				students need to
Structural Analysis								take it.
土壤力學								Only civil major
Soil Mechanics	3			3				students need to
5011 Weenames								take it.
混凝土品質控制								Only civil major
Quality Control of Concrete	3			3				students need to
Quanty control of concrete								take it.
物理化學 (上)								Only chemical
Physical Chemistry I	3		3					major students
								need to take it.
物理化學 (下)								Only chemical
Physical Chemistry II	3			3				major students
, , , , , , , , , , , , , , , , , , ,								need to take it.
La Maria (Salara)								Only chemical
有機化學 (上)	3		3					and materials
Organic Chemistry I	3		3					major students
								need to take it.
上14.71 臼 (丁)								Only chemical
有機化學 (下)	3			3				and materials
Organic Chemistry II								major students
								need to take it.
質能均衡								Only chemical
Material and Energy Balances	3			3				major students
四二1016均以10名()								need to take it.
單元操作與輸送現象(一)								Only chemical
Unit Operation and Transport	3			3				major students
Phenomena (I)								need to take it.
材料熱力學								Only materials
Thermodynamics of Materials	3		3					major students
·								need to take it.
材料實驗(一)								Only materials
Materials Science and Engineering	1		1					major students
Laboratory (I)								need to take it.
高分子導論								Only materials
Introduction to Polymer Systems	3			3				major students
								need to take it.
材料動力學與相變化								Only materials
Kinetics and Phase	3			3				major students
Transformation of Materials								need to take it.

	1					T T	1
流體力學							Only mechanical
Fluid Mechanics	3			3			major students
1 faid Wicchaines							need to take it.
自動控制(一)							Only mechanical
Automation Control (I)	3			3			major students
Automation Control (1)							need to take it.
機械設計							Only mechanical
	3			3			major students
Mechanical Design							need to take it.
製造學							Only mechanical
	3			3			major students
Manufacturing Processes							need to take it.
機械實習(二)-電子與自控領域							Only mechanical
Mechanical Lab (II): Electronics	1			1			major students
and Automatic Control Fields	1			1			need to take it.
4J. /击 纽							Only mechanical
熱傳學	3				3		major students
Heat Transfer	3				3		need to take it.
機械實習(三)-熱流領域							Only mechanical
Mechanical Lab (III) - Thermal	1				1		major students
and Fluid Science	1				1		need to take it.
and I faid Science							
鋼筋混凝土設計	_			_			Only civil major students need to
Reinforced Concrete Design	3			3			
							take it.
鋼結構設計							Only civil major
Structural Steel Design	3			3			students need to
							take it.
工程管理							Only civil major
Project Management	3			3			students need to
							take it.
基礎工程							Only civil major
Foundation Engineering	3			3			students need to
							take it.
工程規劃與控制							Only civil major
Project Planning & Control	3				3		students need to
							take it.
土壤力學試驗							Only civil major
Soil Mechanics Test	1				1		students need to
							take it.
材料與結構試驗							Only civil major
Material and Structural Test	1				1		students need to
							take it.

(1			1	 1	
Instrumental Analysis 3	人 養器分析							Only chemical
Receive to take it. 化工熱力學 Chemical Engineering Thermodynamics 平元禄行契翰送現象(二) Unit Operation and Transport Phenomena (III) 化学技術實質(一) Chemical Technology Lab. I 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		3			3			major students
Thermodynamics Thermodynamics P元禄作與翰廷現象(二) Unit Operation and Transport Phenomena (II) 化學技術實習(一) Chemical Technology Lab. I 化學技術實習(二) Chemical Technology Lab. II 化學技術實習(二) Chemical Reaction Engineering 基元禄作與翰廷現象(三) Unit Operation and Transport Phenomena (III) 名子控制 Process Control 名子控制 Process Control 基品與熱射導論 Introduction to X-ray Crystallography and Diffraction 丰等體材料物理 Physical Properties of Materials 材料有數(三) Materials Science and Engineering Laboratory 材料育翰(三) Materials Science and Engineering Laboratory 材料分析 Characterization of Materials 3	mstrumental / mary sis							need to take it.
Thermodynamics	化工熱力學							Only chemical
平元操作與輸送現象(二) Unit Operation and Transport Phenomena (II) 化學技術質習(一) Chemical Technology Lab. I 化學技術質習(二) Chemical Technology Lab. II 「作學技術質習(二) Chemical Technology Lab. II 「作學技術質習(二) Chemical Technology Lab. II 「作學技術質習(二) Chemical Reaction Engineering 「中華 (1) 「中華 (1) 「中華 (2) 「中華 (2) 「中華 (3) 「中華 (3) 「中華 (4) 「中華 (Chemical Engineering	3			3			major students
Unit Operation and Transport Phenomena (II) 化學技術實習(一) Chemical Technology Lab. II 化學技術實習(二) Chemical Technology Lab. II 「大學技術實習(二) Chemical Technology Lab. II 「大學技術實習(二) Chemical Technology Lab. II 「大學技術實習(二) Chemical Reaction Engineering 「表現 「大學技術與輸送現象(三) Unit Operation and Transport Phenomena (III) 「程序控制 「Process Control 」 「大學技術學輸送現象(三) 「中華技術學輸送現象(三) 「中華技術學輸送現象(三) 「中華技術學輸送現象(三) 「中華技術學輸送現象(三) 「中華技術學輸送現象(三) 「中華技術學輸送現象(三) 「中華技術學輸送現象(三) 「中華技術學和學性質 「中華技術學術學」」 「中華技術學術學學」 「中華技術學術學」 「中華技術學術學」 「中華技術學術學所」 「中華技術學術學」 「中華技術學術學術學術學術學術學術學術學術學術學術學術學術學術學術學術學術學術學術學	Thermodynamics							need to take it.
Phenomena (II) 化學技術實習(一) Chemical Technology Lab. I 化學技術實習(二) Chemical Technology Lab. II 几度應工程 Chemical Reaction Engineering 享元操作與輸送現象(三) Unit Operation and Transport Phenomena (III) 程序控制 Process Control 3 3 3 3 3 4 6 7 7 7 8 7 8 7 8 8 8 8 8 8	單元操作與輸送現象(二)							Only chemical
化學技術實習(一) Chemical Technology Lab. I 化學技術實習(二) Chemical Technology Lab. II 1 1 1 1 1 1 1 1 1 1 1 1	Unit Operation and Transport	3			3			major students
Re字技術質質(二) Chemical Technology Lab. I 化學技術質習(二) Chemical Technology Lab. II 1 1 1 1 1 1 1 1 1 1 1 1	Phenomena (II)							need to take it.
Chemical Technology Lab. I 化學技術實習(二) Chemical Technology Lab. II 人應工程 Chemical Reaction Engineering 平元操作與輸送現象(三) Unit Operation and Transport Phenomena (III) 程序控制 Process Control 材料物理性質 Physical Properties of Materials 结晶與鏡射等論 Introduction to X-ray Crystallography and Diffraction 半導體材料物理 Physics of Semiconductor Materials 大科實驗(二) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) 1 1 1 1 1 1 1 1 1 1 1 1 1	小與壮術實羽(一)							Only chemical
Reference of table it. 化學技術實習(二) Chemical Technology Lab. II 「反應工程 Chemical Reaction Engineering 平元操作與輸送現象(三) Unit Operation and Transport Phenomena (III) 程序控制 Process Control 科科物理性質 Physical Properties of Materials 結晶與統計等論 Introduction to X-ray Crystallography and Diffraction 半等體材料物理 Physics of Semiconductor Materials 林科實驗(三) Materials Science and Engineering Laboratory (III) 林科對新在 Characterization of Materials 3 1 1 1 1 1 1 1 1 1 1 1 1		1			1			major students
Chemical Technology Lab. II	Chemical Technology Lab. 1	_						need to take it.
Chemical Technology Lab. II 1	小 與 廿 新 安 羽 (-)							Only chemical
反應工程 Chemical Reaction Engineering PE元操作與輸送現象(三) Unit Operation and Transport Phenomena (III) 程序控制 Process Control 材料物理性質 Physical Properties of Materials Introduction to X-ray Crystallography and Diffraction 平等體材料物理 Physics of Semiconductor Materials Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) 材料分析 Characterization of Materials 3 3 3 3 3 3 3 3 4 5 5 6 7 7 8 7 8 8 8 8 8 8 8 8 8		1				1		major students
Chemical Reaction Engineering 3	Chemical Technology Lab. II							need to take it.
Chemical Reaction Engineering 3	反確工紹							Only chemical
平元操作與輸送現象(三) Unit Operation and Transport Phenomena (III) 程序控制 Process Control 材料物理性質 Physical Properties of Materials Introduction to X-ray Crystallography and Diffraction 半導體材料物理 Physics of Semiconductor Materials 材料實驗(二) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) 对科分析 Characterization of Materials Tonly materials a a a a a a a a a a a a a a a a a a a		3				3		major students
Unit Operation and Transport Phenomena (III) 程序控制 Process Control 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Chemical Reaction Engineering							need to take it.
Phenomena (III) 程序控制 Process Control 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	單元操作與輸送現象(三)							Only chemical
程序控制 Process Control 材料物理性質 Physical Properties of Materials 结晶與绕射等論 Introduction to X-ray Crystallography and Diffraction 半等體材料物理 Physics of Semiconductor Materials Materials Materials Science and Engineering Laboratory (III) 林科分析 Characterization of Materials 3 3 3 3 3 3 3 3 3 3 3 3 3	Unit Operation and Transport	3				3		major students
Process Control 3	Phenomena (III)							need to take it.
Process Control 3 major students need to take it. 材料物理性質 Physical Properties of Materials Introduction to X-ray Crystallography and Diffraction	铅 克咖啡							Only chemical
Apt 特別理性質		3				3		major students
Physical Properties of Materials 3 3 3 major students need to take it. 结晶奥绕射導論 Introduction to X-ray 3 3 3 major students need to take it. 半導體材料物理 Physics of Semiconductor Materials Materials Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory (III)	Frocess Control							need to take it.
Physical Properties of Materials 3	材料物理性質							Only materials
### standard content of the content		3			3			major students
Introduction to X-ray Crystallography and Diffraction 半導體材料物理 Physics of Semiconductor Materials Materials Materials Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory (III)	Thysical Properties of Materials							need to take it.
Crystallography and Diffraction 半導體材料物理 Physics of Semiconductor Materials Materials Materials Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (IIII) Materials Science and Engineering Laboratory (IIII)	結晶與繞射導論							Only materials
半導體材料物理 3 Only materials Physics of Semiconductor Materials 3 major students need to take it. 材料實驗(二) Only materials Materials Science and Engineering Laboratory 1 1 Materials Science and Engineering Laboratory (III) 1 1 Materials Science and Engineering Laboratory (III) 1 1 Materials Science and Engineering Laboratory (III) 1 0nly materials major students need to take it. Only materials major students 0nly materials major students 0nly materials major students	Introduction to X-ray	3			3			major students
Physics of Semiconductor Materials Materials 材料實驗(二) Materials Science and Engineering Laboratory 材料實驗(三) Materials Science and Engineering Laboratory 材料實驗(三) Materials Science and Engineering Laboratory (III) Materials Science and Engineering Laboratory (III) 材料分析 Characterization of Materials 3	Crystallography and Diffraction							need to take it.
Materials Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory (III) Naterials Science and Engineering Laboratory (III)	半導體材料物理							Only materials
Materials 村料實驗(二) Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory Materials Science and Engineering Laboratory (III) 和社会的 是一个专家的问题,我们就是一个专家的一个专家的一个专家的一个专家的一个专家的一个专家的一个专家的一个专家的	Physics of Semiconductor	3			3			major students
Materials Science and Engineering Laboratory 村料實驗(三) Materials Science and Engineering Laboratory (III) 村料分析 Characterization of Materials 1	Materials							need to take it.
Materials Science and Engineering Laboratory 村料實驗(三) Materials Science and Engineering Laboratory (III) 村料分析 Characterization of Materials 1	材料實驗(二)							Only materials
Laboratory need to take it. 材料實驗(三) Only materials Materials Science and Engineering Laboratory (III) 1 材料分析 Only materials Characterization of Materials 3	Materials Science and Engineering	1			1			
材料實驗(三) Materials Science and Engineering Laboratory (III) 材料分析 Characterization of Materials A おお分析 Characterization of Materials Only materials major students Only materials major students		_						need to take it.
Materials Science and Engineering Laboratory (III) 材料分析 Characterization of Materials 1	·							Only materials
Laboratory (III) 村料分析 Characterization of Materials 1		1				1		-
材料分析 Characterization of Materials 3 Only materials major students		1				1		-
材料分析 Characterization of Materials 3 major students								Only materials
Characterization of Materials 5 5		3				3		
need to take it.	Characterization of Materials	3				3		need to take it.

化學工程實習(一)							
Chemical Engineering Lab (I)	1				1		
化學工程實習(二)							
Chemical Engineering Lab (II)	1					1	
程序設計							
Process Design	3					3	
實務專題(一)							1. Students are
Special Topic (I)	2				2		required to take
實務專題(二)							at least 4 credits
Special Topic (II)	2					2	of either special
先進科技全英專班校外實習(一)							topic or
Internship in International	4				4		internship.
Advanced Technology Program (I)							2. Students take
先進科技全英專班暑期校外實							summer
習(一)							internship during
Summer Internship in	2						summer vacation
International Advanced							of sophomore
Technology Program (I)							year or junior
100111010gy 110grain (1)	ĺ	1					year.

備註:實際開課學期依當學年度課程公告為準。The actual semester of course offerings is determined by the curriculum announcement of the respective academic year.