國立暨南國際大學 應用材料及光電工程 學系學士班必選修科目一覽表

Undergraduate Program Course Catalog of Department of <u>Applied Materials and Optoelectronic</u> Engineering ,National Chi Nan University

本表(111)學年度入學新生適用 Effective for students admitted in Fall,2022

最低畢業學分: <u>128</u>學分,全校共同課程<u>15</u>學分,通識領域課程<u>16</u>學分,系必修<u>51</u>學分,選修<u>34</u>學分,自由選修<u>12</u>學分。Undergraduate requirements: a minimum of <u>128</u> required credits, including <u>15</u> credits in the school-wide curriculum, <u>16</u> credits of General Education courses, <u>51</u> credits of Departmental required courses and <u>34</u> credits of elective courses and <u>12</u> credits of school elective courses.

一、井同課:	共同課程 1.School-Wide Curriculum 程(必修15學分) A. School-Wide Required Co	urses (12 ci	redits)				
課程代號 Course Code	課程名稱(中文及英文)	學分數 Credits	備 註Notes				
	英文一(上) English I(1)	2	自110學年度起,英文能力分班改為依照本校自辦英檢(OOPT)作依據,				
	英文一(下) English I(2)	2	為三級上課:前10%的同學將分配至「進階班英文」上課;中間80% 學將分配至原班英文上課;後10%的同學將分配至「基礎班英文」 Since the first semester of 110 Academic Year (September2021), the competence-based class grouping policy of Freshmen English (Course T. English 1) will be based on registered student's OOPT scores; Students v accordingly divided into three different levels: Advanced English (top 10 General English (middle 80%) and Basic English (bottom 10%).				
	英文二 English II	2	General English (initidie 80%) and Basic English (bottom 10%).				
	國文(上) Chinese(1)	2	僑外生得以修習「僑外生華語文」抵免國文。(Overseas students take				
	國文(下) Chinese(2)	2	Chinese for Overseas Students)				
	社會服務學習(上) Service Learning(1)	1	依所屬學系分班上課,無特殊原因不得跨班選課。(Students are divided				
	社會服務學習(下) Service Learning(2)	1	into groups by their own department, without any proper reasons they cannot change the decision.)				
	大一體育(上)Physical Education (1)	0.5	上學期依所屬學系分班上課,無特殊原因不得跨班選課,惟未達40人之學				
	大一體育(下)Physical Education (2)	0.5	系、院學士班班級,則採合併班開課;下學期則依運動項目分班,自由發課。 (In the first semester of freshman, students are arranged to take Physical Education (1) by their original department. Without any proper reasons, changwill be prohibited. If a class of the department or the interdisciplinary program that is less than 40 students, the combined class will be adopted. In the second semester of freshman, studetns are able to take Physical Education (2) by their interesting.)				
	特色運動(Featured Sports)	2	大二開始,每學期限修一項,畢業前須完成至少2項特色運動(Students are limited to take 1 featured sports course each semester since sophomore. At least 2 featured sports courses are required before graduation.)				
通	識講座 General Education Seminar	0	畢業前至少應出席6場。(Students are required to attend at least 6 lectures before graduation.)				
二、共同選任	修課程 (各系依共同選修加列課程) B. Sch	nool-Wide I	Elective Courses				
	第二外語(Second Foreign Language)		含日文、韓文、法文、德文及西班牙文等。(Including Japanese, Korean, French, German and Spanish, etc.)				
	東南亞語言(Southeast Asia Languages)		含泰語、越南語、緬甸語、印尼語及馬來語,可抵特色通識「東南亞」次領域。 (Including Thai, Vietnamese, Burmese, Indonesian and Malay. These courses can be credited course credits in Southeast Asia of Topical General Education)				
	進階語文(Advanced English)						
· · · · · · · · · · · · · · · · · · ·	其他選修(Other Elective Course)						
貳、通識令	頁域課程(至少16學分) 2.General Educa	ation Cou	rses				
主領域 Main Field	次領域 Sub-Field	學分數 Credits	備 註 Notes				
人文領域	文學與藝術(Literature and Art)		每次領域各1門,共至少修習4學分。(Students in the two sub-fields should				
Humanities	歷史哲學與文化(History, Philosophy and	4	attend at least one course, and attend a total of at least 4 credits)				
社會領域	法政與教育(Law, Politics and Education)	4	每次領域各1門,共至少修習4學分。(Students in the two sub-fields should				
Society	社經與管理(Society, Economy and	4	attend at least one course, and attend a total of at least 4 credits)				
自然領域	工程與科技(Engineering and Technology)	4	每次領域各1門,共至少修習4學分。(Students in the two sub-fields should				
Nature	生命與科學(Life and Science)	4	attend at least one course, and attend a total of at least 4 credits)				
持色通識領域	東南亞(Southeast Asia)		自由選擇其中兩個次領域各修習一門,共至少修習4學分。(Students				
Topical	綠概念(Green Concept)	4	should select two sub-fields courses in the main field, and attend a total of at				
General Education	在地實踐(Social Practice)	1	least 4 credits)				
	專業課程 3.Departmental Courses		·				

課程代號 Course Code	課 程 名 稱(中文及英文) Course Name (Chinese and English)	學分數 Credits	修別 Course type (required/elective)	開課年級Course availability (freshman/sophomore /junior/senior)	備註 Notes
一、基本文		<u>'</u>	<u>'</u>	/Junior/senior/	ı
280002	微積分(一) Calculus (I)	3	必 (R)	一上 (Freshman 1st Semester)	
280003	普通物理(一) General Physics (I)	3	必 (R)	一上 (Freshman 1st Semester)	
280004	普通化學(一) General Chemistry(I)	3	必 (R)	一上 (Freshman 1st Semester)	
280056	光電科技導論 Introduction to Optoelectronic Science	3	必 (R)	一上 (Freshman 1st Semester)	
280009	微積分(二) Calculus (II)	3	必 (R)	一下 (Freshman 2nd Semester)	
280010	普通物理(二) General Physics (II)	3	必 (R)	一下 (Freshman 2nd Semester)	
280011	普通化學(二) General Chemistry(II)	3	必 (R)	一下 (Freshman 2nd Semester)	
280079	電路學 Circuits	3	必 (R)	一下 (Freshman 2nd Semester)	
280055	材料科學導論 Introduction to Materials Science	3	必 (R)	一下 (Freshman 2nd Semester)	
280016	工程數學(一) Engineering Mathematics(I)	3	必 (R)	二上 (Sophomore 1st Semester)	先修課程:280002微積分(一) Prerequisite courses:280002 Calculus(I)
280017	電磁學(一) Electromagnetics(I)	3	必 (R)	二上 (Sophomore 1st Semester)	
280015	電子學(一) Electronics(I)	3	必 (R)	二下 (Sophomore 2nd Semester)	
280063	材料分析 Materials Analysis	3	必 (R)	三上 (Junior 1st Semester)	
280095	光學 Optics	3	必 (R)	三上 (Junior 1st Semester)	
280027	近代物理 Modern Physics	3	必 (R)	三上 (Junior 1st Semester)	
280109	專題實作(一) Experimental Research Project(I)	1	必 (R)	三上 (Junior 1st Semester)	
280101	材料實驗 Materials Experiments	2	必 (R)	三下 (Junior 2nd Semester)	
280110	專題實作(二) Experimental Research Project(II)	1	必 (R)	三下 (Junior 2nd Semester)	
280102	光電工程實驗 Optoelectronic Engineering Lab.	2	必 (R)	三下 (Junior 2nd Semester)	
二、一般專	專業選修課程				
280044	計算機概論 Basic Computer Concept	3	選 (E)	(freshman)	

	並 泽州田 幸 胚		766		1
280064	普通物理實驗	1	選	(f1)	
	General Physics Lab.		(E)	(freshman)	
280076	程式語言設計	3	選	_	
200070	Programming Design	3	(E)	(freshman)	
200001	物理發展史	2	選	_	
280091	History of Physics	3	(E)	(freshman)	
				(II Gamman)	
280103	程式設計實務應用	3	選	(C 1)	
	Programming Practical		(E)	(freshman)	
	應用材料及光電工程導論		766		
280105	Overview of Applied Materials and	1	選	(C 1)	
	Optoelectronic Engineering		(E)	(freshman)	
	線性代數		78 E		
280106		3	選	(f1)	
	Linear Algebra		(E)	(freshman)	
	數位科技與光電應用	_	選		
280107	Digital technology and optoelectronic	3	(E)	(freshman)	
	applications		(2)	(11 0 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
200012	材料工程與應用	2	選	<u> </u>	
280013	Application of Materials Engineering	3	(E)	(sophomore)	
				\ 1 /	
280019	有機化學	3	選		
	Organic Chemistry		(E)	(sophomore)	
280020	奈米科技導論	3	選		
	Introduction to Nano-technology		(E)	(sophomore)	
280021	科技英文	3	選		
200021	English for Science and Technology		(E)	(sophomore)	
280023	工程數學 (二)	3	選	<u> </u>	
280023	Engineering Mathematics(II)	3	(E)	(sophomore)	
200024	電磁學(二)	3	選	1 1	
280024	Electromagnetics(II)	3	(E)	(sophomore)	
	有機反應合成與機制		選		
280032	Organic Reactions and Mechanisms	3	(E)	(sophomore)	
	進階電子電路實驗		選		
280077	Advanced Microelectronic Circuit Lab.	1	(E)	(sophomore)	
	Advanced Whereelectronic Circuit Eas.		(L)	(зорношоге)	
	材料熱力學		選	_	先修課程:280016工程數學(一)
280080	Thermodynamics of Materials	3	(E)	(sophomore)	Prerequisite courses: 280016 Engineering
	Thermodynamics of Waterials		(2)	(sopnomore)	Mathematics(I)
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		786	_	
280081	光電材料理論 Evadementals of alastrical and antical materials	3	選		
	Fundamentals of electrical and optical materials		(E)	(sophomore)	
280082	科技英文	2	選		
200002	English for Science and Technology		(E)	(sophomore)	
280085	進階電路學	3	選	<u> </u>	
280083	Advanced Electric Circuits	3	(E)	(sophomore)	
200007	力學	4	選	<u> </u>	
280087	Mechanics	4	(E)	(sophomore)	
200000	物理實驗	4	選		
280088	Physics Lab.	4	(E)	(sophomore)	
	奈米材料		選		
280094	Nano materials	3	(E)	(sophomore)	
	電子電路實驗		選		
280098	Microelectronic Circuit Lab.	2	(E)	(sophomore)	
				(sophomore)	
280113	基礎LabVIEW程式設計	3	選		
	Fundamental LabVIEW Programming Design		(E)	(sophomore)	
	當代奈米科技與光電產業簡介		\pu		
280114	Introduction of Contemporary Nano-	3	選		
	technology and Optoelectronic Industry		(E)	(sophomore)	
	有機化學(一)		選		
280115	有機任学(一) Organic Chemistry (I)	3		(conhomers)	
			(E)	(sophomore)	
280116	有機化學(二)	3	選	— — ·	
	Organic Chemistry (II)		(E)	(sophomore)	
l	電子學(二)	3	選		
280022	Electronics(II)	3	(E)	(junior)	

280033	П			Ī		
Nano Fabrication Februagues	280033	奈米製作技術	2	選	三	
Microstructural Analysis of Materials 3 (i) (junior)	280033	Nano Fabrication Techniques	3	(E)	(junior)	
Microstructural Analysis of Materials 3 (i) (junior)		材料帶結構分析		猩	=	
2003	280034		3			
Chemistry of Polymen 3						
Chemistry of Polymers	280037		3			
280040	200057	Chemistry of Polymers		(E)	(junior)	
280040	200020	有機材料實驗		撰	三	
280040	280038		1			
Nano Manufacturing Lab.						
Nano Manufacturing Lab.	280040		1	· ·		
Crystal Structure and Diffraction 3						
Crystal Structure and Diffraction	200041	a 體結構與繞射	2	選	三	
平前周示器観論	280041	Crystal Structure and Diffraction	3	(E)	(iunior)	
Second						
280043	280042		3			
280048						
Optical Fiber Perices - Principles and Applications	280043	光纖元件原理與應用	2	選	三	
280048	200043	Optical Fiber Devices - Principles and Applications	3	(E)	(junior)	
280049 Polymer Materials 3 (E) (junior)						
280049	280048		3			
Sano Optoelectronic Materials and Devices						
Nano Optoelectronic Materials and Devices (E) (junior) (jun	280049		3	選		
280052 海親村科與工程	200049	Nano Optoelectronic Materials and Devices	5	(E)	(junior)	
280052		*				
280053 量子月學詩論 Introduction to Quantum Mecannics 3 E (junior)	280052		3			
Entroduction to Quantum Mecahnics 3 E Giunior	 					
Introduction to Quantum Mecahnics E (junior)	280053	量子力學導論	3	選	三	
28006 電子學(三) Electronics(IIII) 3 選 三 (junior) 280067 Principle and application of laser 3 E (E) (junior) 280067 原子力羅微鏡 3 選 三 (junior) 280068 積體電影程技術 3 E (E) (junior) 280070 Advanced Optics 3 E (E) (junior) 280071 上澤體元件物理導論 三 (junior) 280073 上澤體元件物理導論 三 (junior) 280074 表面科學 Surface Science 3 E (E) (junior) 280075 光電材料 Electrical and optical properties of materials 3 E (junior) 280076 競が理學 3 E (junior) 280077 大電材料 Electronic Materials 3 E (junior) 280080 電子材料 Electronic Materials 3 E (junior) 280090 近代物理學 4 選 三 (junior) 280090 近代物理學 5 (junior) 280091 世界技術技術與元件 3 選 三 (junior) 280092 日本の Nacoubse - Materials and practices 3 E (junior) 280093 大澤 大都 大部 大郎	200055	Introduction to Quantum Mecahnics	3	(E)	(junior)	
Electronics(III)				猩	=	
280068	280061		3			
Principle and application of laser						
Principle and application of laser	280065		3	選		
280067	280003	Principle and application of laser	3	(E)	(junior)	
Atomic Force Microscopy 3 (E) (junior)		原子力顯微鏡				
280068 積體電路製程技術 Semiconductor Manufaturing technology	280067		3			
Semiconductor Manufaturing technology Semiconductor Manufaturing technology Beh 光學 Advanced Optics Gemiconductor Physics and Devices Surface Science Surface Science Surface Science Surface Science Surface Science Surface Science Gemiconductor Physics of materials Gemiconductor Physics of materials Gemiconductor Physics Surface Science Gemiconductor Physics Surface Science Gemiconductor Physics Gemiconductor Gemiconduc						
Semiconductor Manufaturing technology	280068		3			
Advanced Optics 3	200000	Semiconductor Manufaturing technology		(E)	(junior)	
Advanced Optics 3		3A:17t: 1/2 E83		786		
Advanced Optics (E) (junior)	280070		3			
Sundamentals of Semiconductor Physics and Devices Sundamentals of Semiconductor Physics and Devices (I) Semiconductor Physics and Devices (II) Sundamentals		Advanced Optics		(E)	(junior)	
Sundamentals of Semiconductor Physics and Devices Sundamentals of Semiconductor Physics and Devices (I) Semiconductor Physics and Devices (II) Sundamentals						
Sundamentals of Semiconductor Physics and Devices Sundamentals of Semiconductor Physics and Devices (I) Semiconductor Physics and Devices (II) Sundamentals	200072	半導體元件物理遵論	2	選	三	
表面科學 Surface Science	280073		3	(E)		
Surface Science Surface S		Tandamentals of genneonauctor Enginees and Devices		(E)	(Junior)	
Surface Science Surface S		表 面科		辑	=	
280078 光電材料	280074		3			
Electrical and optical properties of materials 3 E (junior)					(Junior)	
Electrical and optical properties of materials (E) (junior)	280078	光電材料	2	選	三	
280086 熱物理學	200076	Electrical and optical properties of materials	3	(E)	(junior)	
Thermal Physics 3 (E) (junior)						
電子材料 Electronic Materials 3 選 三 (junior)	280086		3			
Electronic Materials 280090 近代物理學 Modern Physics 280092 光柵基礎與實務 Gratings fundamentals and practices 280093 碳奈米管材料與元件 Carbon Naotubes - Materials and Devices 280096 材料光學 Optical properties of materials 280108 半導體元件物理導論 Fundamentals of Semiconductor Physics and Devices 280117 280118 上等體元件物理(二) Semiconductor Physics and Devices (II) 280119 Ptil ** Electronic Materials 4 Electronic Materials 4 Electronic Materials 5 (E) (junior) 2 Electronic Materials 4 Electronic Materials Electronic Materials 5 Electronic Materials 6 Electronic Materials 5 Electronic Materials 6 Electronic Materials 5 Electronic Materials 6 Electronic Materials 6 Electronic Materials 6 Electronic Materials 5 Electronic Materials 6 Electronic Materia	 					
Electronic Materials Electronic Material	280089		3			
近代物理學		Electronic Materials		(E)		
Modern Physics 4 (E) (junior)	200000	折代物理學				
発標を映實務 Gratings fundamentals and practices 3 選 三 (junior)	280090		4			
Gratings fundamentals and practices E	 					
Gratings fundamentals and practices (E) (junior)	280092		3			
280096 Carbon Naotubes - Materials and Devices 3 (E) (junior) 280096 材料光學 Optical properties of materials 3 選 (E) (junior) 280108 半導體元件物理導論 Fundamentals of Semiconductor Physics and Devices 2 選 (E) (junior) 280117 半導體元件物理(一) Semiconductor Physics and Devices (I) 3 選 (E) (junior) 280118 半導體元件物理(二) Semiconductor Physics and Devices (II) 3 選 (E) (junior) 280119 光電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and (E) (junior) 3 選 (E) (junior)						
280096 Carbon Naotubes - Materials and Devices 3 (E) (junior) 280096 材料光學 Optical properties of materials 3 選 (E) (junior) 280108 半導體元件物理導論 Fundamentals of Semiconductor Physics and Devices 2 選 (E) (junior) 280117 半導體元件物理(一) Semiconductor Physics and Devices (I) 3 選 (E) (junior) 280118 半導體元件物理(二) Semiconductor Physics and Devices (II) 3 選 (E) (junior) 280119 光電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and (E) (junior) 3 選 (E) (junior)	200002	碳奈米管材料與元件	2	選	三	
280096 材料光學 Optical properties of materials 3 選 三 (junior) 280108 半導體元件物理導論 Fundamentals of Semiconductor Physics and Devices 2 選 三 (junior) 280117 半導體元件物理(一) Semiconductor Physics and Devices (I) 3 選 三 (junior) 280118 半導體元件物理(二) Semiconductor Physics and Devices (II) 3 選 三 (junior) 280119 光電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and Optoelectronic Semiconductor Device Fabri	∠80093		3			
Optical properties of materials 2						
Optical properties of materials E (junior)	280096		3			
Endamentals of Semiconductor Physics and Devices E		Optical properties of materials		(E)	(junior)	
Endamentals of Semiconductor Physics and Devices E		平道: 一件物用道: 全		猩	=	
280117 半導體元件物理(一) Semiconductor Physics and Devices (I) 3 選 三 (E) (junior) 280118 半導體元件物理(二) Semiconductor Physics and Devices (II) 3 選 三 (junior) 280119 光電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and Optoelectronic Semiconductor Device Fabrication and Optoelectronic Semiconductor Device Fabrication And Optoelectroni	280108		2			
Semiconductor Physics and Devices (I) 280118 半導體元件物理(二) Semiconductor Physics and Devices (II) 280119 大電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and 3 (E) (junior) 選 三 (junior)	 	·			-	
Semiconductor Physics and Devices (I) 280118 半導體元件物理(二) Semiconductor Physics and Devices (II) 280119 大電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and 3 (E) (junior) 選 三 (junior)	200117	半導體元件物理(一)	2	選	三	
280118 半導體元件物理(二) Semiconductor Physics and Devices (II) 3 選 三 (junior) 280119 光電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and Optoelectronic Semiconductor Device Fabrication Actual Device Fabrication Act	∠8U11/	· ·	3			
Semiconductor Physics and Devices (II) **E電半導體製程及量測** Optoelectronic Semiconductor Device Fabrication and 3 (E) (junior) **Eunior Semiconductor Device Fabrication and 3 (E) (junior)	 					
Semiconductor Physics and Devices (II) (E) (Junior) 光電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and 3 (E) (junior)	280118	· ·	3			
光電半導體製程及量測 Optoelectronic Semiconductor Device Fabrication and 3 選 三 (E) (junior)		Semiconductor Physics and Devices (II)	-	(E)	(junior)	
280119 Optoelectronic Semiconductor Device Fabrication and 3 (E) (import)				N		
1	280110		3		三三	
Cimateterization (Connology	200117		3	(E)	(junior)	
						i l

1	1			1	T
280120	有機/高分子光電材料與元件 Organic/Polymeric Optoelectronic Materials and Devices	3	選 (E)	三 (junior)	
280121	奈米光學 Nanooptics	3	選 (E)	三 (junior)	
280122	光電模組與系統	3	選	Ξ	
	Optoelectronic Modules and Systems		(E)	(junior)	
280123	發光二極體 Light Emitting Diode	3	選 (E)	三 (junior)	
280124	有機電激發光材料與顯示技術 Organic Light Emitting Materials and Display Technology	3	選 (E)	三 (junior)	
280125	電池材料 Battery Materials	3	選 (E)	三 (junior)	
280126	材料檢測與製程 Material characterizations and fabrications	3	選 (E)	三 (junior)	
280127	生物醫學材料	3	選	三	
	Biomedical Materials		(E)	(junior)	
280128	電子陶瓷 Electronic Ceramics	3	選 (E)	三 (junior)	
280129	光電元件 Optoelectronic Devices	3	選 (E)	三 (junior)	
280130	光電與資訊科技	3	選	三	
	Optoelectronics and Information Technology		(E)	(junior)	
280131	生醫光電 Biophotonics	3	選 (E)	三 (junior)	
280132	太陽能電池導論 Introduction to Solar Cells	3	選 (E)	三 (junior)	
280133	光電感測器及前置電路設計 Optical sensor and front-end readout circuit design	3	選 (E)	三 (junior)	
280134	儲能材料與元件 Energy storage materials and devices	3	選 (E)	三 (junior)	
280135	CMOS影像感測器及系統設計 CMOS image sensor and system design	3	選 (E)	三 (junior)	
280136	新世代能源材料 Next-Generation Energy Materials	3	選 (E)	三 (junior)	
280137	科技英文概論	1	選	三	
	Introduction to scientific/technical English 高頻元件及電路分析		(E) 選	(junior) 三	
280138	同頻几件及电路万例 High frequency device and circuit analysis	3	迭 (E)	(junior)	
280151	磊晶工程 Epitaxy Engineering	3	選 (E)	三 (junior)	
280152	液流電池與能源存取	3	選	三	
280069	Flow Batteries and Energy Storage 光電子學	3	(E) 選	(junior) 三	
	Photo Electronics 積體光學		(E) 選	(junior)	
280075	Integrated Optics	3	(E)	(senior)	
280084	企業實習 Enterprise Internship	6	選 (E)	四 (senior)	
280097	固態電子學 Solid-State Electronics	3	選 (E)	四 (senior)	
280099	專題(三) Research Project(Ⅲ)	1	選 (E)	四 (senior)	
280100	專題(四)	1	選	四	
	Research Project(IV) 固態電子實驗		(E) 選	(senior)	
280104	Solid State Electronics Lab	2	医 (E)	(senior)	

п	1	1	1	h	
280111	專題實作(三) Experimental Research Project(III)	1	選 (E)	四 (senior)	
280112	專題實作(四) Experimental Research Project(IV)	1	選 (E)	(senior)	
280139	非線性光學原理與材料 Nonlinear optical theory and materials	3	選 (E)	四 (senior)	
280140	固態電子物理 Solid State Electronic Physics	2	選 (E)	四 (senior)	
280141	自動化光電量測 Automatic optoelectronic measurement	3	選 (E)	四 (senior)	
280142	固態電子學(一) Solid State Electronics(I)	3	選 (E)	四 (senior)	
280143	機器學習(一) Machine learning (I)	3	選 (E)	四 (senior)	
280144	儀器控制 Instrument Control	3	選 (E)	四 (senior)	
280145	虛擬儀控程式設計 Programming of Virtual Instruments	3	選 (E)	四 (senior)	
280146	固態電子元件 Solid State Electronic Devices	3	選 (E)	四 (senior)	
280147	資料擷取與感測電路 Data acquisition and sensing circuits	3	選 (E)	四 (senior)	
280148	進階LabVIEW程式設計 Advanced LabVIEW Programming Design	3	選 (E)	四 (senior)	
280149	固態光學元件 Solid State Optical Devices	3	選 (E)	四 (senior)	
280150	半導體製程技術 Semiconductor Processing Technology	3	選 (E)	四 (senior)	
280153	固態電子實驗(二) Solid State Electronics Lab (Ⅱ)	3	選 (E)	四 (senior)	
280154	機器學習(二) Machine learning (Ⅱ)	3	選 (E)	ाप (senior)	
280155	固態電子學(二) Solid State Electronics(Ⅱ)	3	選 (E)	四 (senior)	
三、其他系	系所專業選修課程				
240035	物理化學(一) Physical Chemistry (I)	3	選 (E)	(sophomore)	應化系(Department of applied chemistry)
240038	物理化學(二) Physical Chemistry(II)	3	選 (E)	三 (junior)	應化系(Department of applied chemistry)
240041	儀器分析 Instrumental Analysis	3	選 (E)	三 (junior)	應化系(Department of applied chemistry)
220019	材料力學 Machanics of Materials	3	選 (E)	∃ (junior)	土木系(Department of civil engineering)
220085	工程材料 Engineering Materials	3	選 (E)	∃ (junior)	土木系(Department of civil engineering)
230091	VLSI導論 Introduction to VLSI	3	選 (E)	(sophomore)	電機系(Department of Electrical Engineering)

520017	半導體構裝材料與製程 Semiconductor Packaging Materials and Processes	3	選 (E)	三 (junior)	科院學土班(Bachelor program of college of science and technology)
240108	電化學 Electroanalytical Chemistry	3	選 (E)	三 (junior)	應化系(Department of applied chemistry)
230257	類比VLSI電路設計 Analog VLSI Circuits Design	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230259	類比積體電路系統設計及應用 Analog VLSI System Design Applications	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230255	積體電路製程技術(一) Integrated Circuits Fabrication Technology(I)	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230256	積體電路製程技術(二) Integrated Circuits Fabrication Technology(II)	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230282	無線通訊系統 Wireless Communication Systems	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230247	半導體感測器 Semicondctor Sensors	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230254	積體電路元件 Semiconductor Devices forIntegrated Circuits	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230263	太陽能電池 Solar Cells	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230272	醫學電子學 Biomedical Electronics	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)
230262	RFID晶片設計 RFID Chip Design	3	選 (E)	三 (junior)	電機系(Department of Electrical Engineering)