

111學年度日間部 半導體與光電科技系 四技課程規劃表 (111.03.23修訂)

第一學年(111)					第二學年(112)					第三學年(113)					
科目	上學期		下學期		科目	上學期		下學期		科目	上學期		下學期		
	學分	時數	學分	時數		學分	時數	學分	時數		學分	時數	學分	時數	
校必修	體育	0	2	0	2	分類通識	2	2	2	2					
	分類通識	2	2	2	2	分類通識	2	2							
	分類通識	2	2	2	2										
	小計	4	6	4	6	小計	4	4	2	2					
院必修	科技英文(一)(二)	2	2	2	2	科技英文(三)(四)	2	2	2	2	工程倫理			2	2
	應用中文(一)(二)	2	2	2	2										
	微積分(一)(二)	3	3	3	3										
	物理與物理實驗	2	3												
	化學與化學實驗	2	3												
	程式設計	3	3												
	基本電學與電學實驗			2	3										
	人工智慧概論			3	3										
小計	14	16	12	13	小計	2	2	2	2	小計	0	0	2	2	
專業必修	向量分析	3	3			電磁學(一)(二)	3	3	2	2	實務專題	1	1	1	1
	基礎光學導論			2	2	工程數學(一)(二)	3	3	3	3	光電實驗(二)	2	3		
	基礎電子學			2	2	應用電子學	2	2			半導體製程技術	3	3		
	電子學實驗(一)			1	3	電子學實驗(二)	1	3			雷射工程			2	2
	材料科學			2	2	光電系統機構學	2	2			半導體實驗			2	3
						近代物理概論	3	3							
						幾何光學			2	2					
						光電實驗(一)			2	3					
						半導體材料與元件			3	3					
	小計	3	3	7	9	小計	14	16	12	13	小計	6	7	5	6
專業選修	光電產業概論	1	1			程式語言	2	2			實體設計與證照輔導	2	2		
	電路學	2	2			真空技術	2	2			電腦輔助光學系統設計	2	2		
	光電實體建構			2	2	電腦輔助實體設計			2	2	基礎圖控程式設計	2	2		
	電子電路與證照輔導			2	2	材料科學與工程			2	2	數位電路實務	2	2		
						生物醫學工程導論			2	2	綠能光電實習	2	2		
											薄膜技術	2	2		
											因態照明與證照輔導	2	2		
											波動光學	2	2		
											光電材料與元件物理	2	2		
											材料分析			3	3
											電腦輔助照明系統設計			2	2
											光電應用電路			2	2
											光電平面顯示器			3	3
											光電元件與應用			2	2
											色彩學			2	2
										光電半導體製程技術			2	2	
										半導體製程技術			2	2	
										薄膜光學與鍍膜技術			2	2	
										共通核心職能課程			3	3	
										光電感測工程			2	2	
										微光機電系統概論			2	2	

第四學年(114)				
科目	上學期		下學期	
	學分	時數	學分	時數
校必修				
	小計			
院必修				
	小計			
專業必修	校外實習	9	9	
	小計	9	9	
專業選修	I/F-T-LCD面板設計與驅動	3	3	
	光電創意設計	3	3	
	液晶材料與光學	3	3	
	太陽光電技術	3	3	
	電腦輔助光學薄膜設計	3	3	
	光電半導體量測技術	3	3	
	微光機電元件與系統	3	3	
	校外實習		9	9
	太陽能驅動LED顯示裝置		3	3
	科技管理		3	3
	半導體製程材料分析		3	3
奈米生醫光電技術		3	3	
有機發光二極體顯示技術		3	3	
投影顯示技術		3	3	

專業選修課程開課規劃	
學期	時數
第一學年第一學期	3
第一學年第二學期	0
第二學年第一學期	2
第二學年第二學期	6
第三學年第一學期	10
第三學年第二學期	10
第四學年第一學期	0
第四學年第二學期	3
開課時數總計	34

科目類別：
 共同科目：體育
 通識科目：分類通識
 專業科目：院必修、專業必修、專業選修

- 注意事項：
- 本校訂有學生基本能力與畢業門檻實施辦法。
 - 學生需修習勞作教育(0學分4小時)，並於第一學年上下二學期實施。
 - 一~三年級每學期應修習16~30學分，四年級每學期應修習9~30學分。
 - 最低畢業學分：128學分；必修學分：102學分。
 選修學分：_26_學分(選修學分合跨系選修學分)；惟於本系專業選修學分不得低於_14_學分。
 - 畢業年級相當於國內高級中等學校二年級之國外或香港、澳門同類同級學校畢業生，以同等學歷修讀本校學士學位者，最低畢業學分：140學分；必修學分：_102_學分；
 選修學分：_38_學分(選修學分合跨系選修學分)，惟於本系專業選修學分不得低於_26_學分，可延長修業年限三年。
 - 學生應修習校外實習課程，相關辦法依「本校半導體與光電科技系學生校外實習教學實施要點」辦理。
 - 表列選修課程僅供參考，依實際狀況調整。

MUST Curriculum Planning for Undergraduate Students for Academic Years 2022-2025
Department of Semiconductor and Electro-Optical Technology (111/03/23)

1st year(111)					2nd year(112)					3rd year(113)								
	Course	1st semester		2nd semester			Course	1st semester		2nd semester			Course	1st semester		2nd semester		
		Cr.	hr.	Cr.	hr.			Cr.	hr.	Cr.	hr.			Cr.	hr.			
MUST Core Required Courses	Physical Education	0	2	0	2	MUST Core Required Courses	Classified general Education	2	2	2	2	MUST Core Required Courses						
	Classified general Education	2	2	2	2		Classified general Education	2	2									
	Classified general Education	2	2	2	2													
	Subtotal	4	6	4	6		Subtotal	4	4	2	2		Subtotal					
School Professional Required Courses	Technical English(I)(II)	2	2	2	2	School Professional Required Courses	Technical English(III)(IV)	2	2	2	2	School Professional Required Courses	Ethics for Engineers			2	2	
	Applied Chinese(I)(II)	2	2	2	2													
	Calculus I (I II)	3	3	3	3													
	Chemistry and Laboratory	2	3															
	Physics and Physics Laboratory	2	3															
	Introduction to Computers and Programming	3	3															
	Basic Electricity and Electricity Experiment			2	3													
	Introduction to Artificial Intelligence			3	3													
Subtotal	14	16	12	13	Subtotal	2	2	2	2	Subtotal								
Department compulsory courses	Vector Analysis	3	3			Department compulsory courses	Electromagnetics(II)	3	3	2	2	Department compulsory courses	Project of Optoelectronics-capstone	1	1	1	1	
	Optics			2	2		Engineering Mathematics(I)(II)	3	3	3	3		Optoelectric Lab(II)	2	3			
	Basic Electronics			2	2		Applied Electronics	2	2				Semiconductor Manufacturing Technology	3	3			
	Electronics Lab(I)			1	3		Electronics Lab(II)	1	3				Laser Engineering			2	2	
	Introduction to Materials			2	2		Mechanism of Optoelectronic System	2	2				Semiconductor Lab			2	3	
							Introduction to Modern Physics	3	3									
							Geometrical Optics			2	2							
	Subtotal	3	3	7	9		Subtotal	14	16	12	13		Subtotal	6	7	5	6	
Department Elective Courses	Introduction to Optoelectric Industry	1	1			Department Elective Courses	Programming Language	2	2			Department Elective Courses	Certification of Solid Design CAD and License Counseling	2	2			
	Basic Circuit Theory	2	2				Vacuum Technology	2	2				Computer-aided Optical System Design	2	2			
	Photoelectric Drawing and modeling			2	2		CAD of Solid Design			2	2		Graphical Programming Language Design	2	2			
	Electronic Circuit and License Counseling			2	2		Material Science and Engineering			2	2		Practice of Digital Circuits	2	2			
							Introduction to Bio-Medicine			2	2		Green Energy Photoelectric Laboratory	2	2			
													Thin Film Technology	2	2			
													Solid State Lighting and License Counseling	2	2			
													Wave Optics	2	2			
													Optoelectronic Material & Device Physics	2	2			
													Materials Analysis			3	3	
													Computer-aided Illumination System Design			2	2	
													Applied Circuits in Optoelectronics			2	2	
													Flat Panel Display			3	3	
													Optoelectronic Device and Application			2	2	

4th year(114)					
	Course	1st semester		2nd semester	
		Cr.	hr.	Cr.	hr.
MUST Core Required Courses					
	Subtotal				
School Professional Required Courses					
	Subtotal				
Department compulsory courses	Off-campus internship	9	9		
	Subtotal				
Department Elective Courses	Design and Operation of TFT-LCD Panels	3	3		
	Creative Design in Optoelectronics	3	3		
	Liquid Crystal Materials and Optic	3	3		
	Solar Photovoltaic Technology	3	3		
	Computer-Assisted Design of Optical Thin Films	3	3		
	The Measurement of Semiconductors	3	3		
	Micro Opto Electro Mechanical Device and System	3	3		
	Off-campus internship			9	9
	Solar-Cell-Driven LED Display			3	3
	Technology Management			3	3
	Semiconductor Material Analysis			3	3
Nano Bio-photonics			3	3	
Technology of Organic Light-Emitting Diode display			3	3	
Projection Display Technology			3	3	

Cr./hr.=Credit/hour

Remarks:

- According to university regulations, students are required to meet the graduation requirement of basic language proficiency and professional skills.
- Students shall take 4 hours Service Education courses (0 credits) in the first and second semester of the first academic year.
- In the first three years, students must take 16-30 credits per semester, and 9-30 credits per semester in the 4th year.
- Minimum graduation credits: 128 credits; Compulsory credits: 102 credits; Elective credits: 26 credits (elective credits include inter-departmental elective credits); the elective credits for majors in the department must not be lower than 14 credits.
- Students having graduated from a foreign country, including Hong Kong and Macau, with the equivalent of the second year of high school study of the ROC's high school sophomore level, or with a high school equivalent degree, need to take 140 credits including compulsory credits, and at least elective credits (including inter-departmental elective credits), while elective professional course credits shall not be fewer than 30 credits. The program can be extended up to 3 academic years.
- Students should take off-campus internship courses, and the relevant measures are handled in accordance with the Implementation of Off-campus Internship Teaching for Students in the Department of Semiconductor and Electro-Optical Technology.
- Elective courses are subject to change if necessary.