

## Study Plan of Academic Year 110~112 (2021~2023) in PHYS(Opto-Electronic Physics Section)

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類別 Type	類別 Module	科目名稱 Course Title	規定學分 Credits		備註 Remark
校訂 Courses Required by the University		導師時間 Academic Advising	0	From Freshman to Senior / 8 semesters	0
		全民國防教育軍事訓練All-out Defense Education Military Training	0	Freshman / 1st & 2nd	0
全人教育 課程 Holistic Education (Required)	核心課程 Fundamental Courses	大學入門 Introduction to University Studies	2	Freshman / 1st	32
		人生哲學 Philosophy of Life	4	Sophomore / 1st & 2nd	
		專業倫理-科技倫理 Professional Ethics-Scientific and Technology Ethics	2	Junior / 2nd	
		體育 Physical Education	0	From Freshman to Sophomore / 4 semesters	
	基本能力課程 Core Abilities Courses	國文 Chinese	4	Freshman / 1st & 2nd	
		外國語文 Foreign Language	8	From Freshman to Sophomore / 4 semesters	
	通識涵養課程 General Education Courses	資訊素養 Information Literacy	0	N/A	
		人文 Humanities & Arts	4	N/A	
	自然 Nature & Technology	4	N/A		
	社會 Social Sciences	4	N/A		
系必修課程 Department Required		微積分(一) Calculus I	3	Freshman/1st	69
		普通物理(一) General Physics (I)	3	Freshman/1st	
		程式設計(一) Computer programming I	3	Freshman/ 2nd	
		微積分(二) Calculus II	3	Freshman/ 2nd	
		普通物理(二) General Physics (II)	3	Freshman/ 2nd	
		電磁學(一) Electromagnetism (I)	3	Freshman/1st	
		電磁學(二) Electromagnetism(II)	3	Sophomore/ 2nd	
		電子學(一) Electronics (I)	3	Sophomore/1st	
		電子學(二) Electronics (II)	3	Sophomore/ 2nd	
		應用數學(一) Applied Mathematics (I)	3	Sophomore/1st	
		普通化學(一) General Chemistry (I)	2	Freshman/1st	
		普通化學(二) General Chemistry (II)	2	Freshman/ 2nd	
		普通物理實驗 General Physics Lab.	2	Freshman/ 1st & 2nd	
		普通化學實驗(一) General Chemistry Lab. (I)	1	Freshman/1st	
		普通化學實驗(二) General Chemistry Lab. (II)	1	Freshman/ 2nd	
		普通物理(三) General Physics (III)	3	Sophomore/1st	
		應用數學(二) Applied Mathematics (II)	3	Sophomore/2nd	
		近代物理 Modern Physics	3	Sophomore/2nd	
		線性代數 Linear Algebra	2	Sophomore/2nd	
		電子學實驗(一) Experiments on Electronics (I)	2	Sophomore/1st	
		實驗物理(三) Experimental Physics (III)	2	Junior/1st	
		量子物理(一) Quantum Physics I	3	Junior/1st	
		光學 Optics	3	Junior/1st	
	幾何光學與光學設計 Geometrical Optics and Optical Design	3	Junior/2nd		
	光電子學 Optoelectronics	3	Junior/2nd		
	光電實驗 Opto-Electronics Laboratory	2	Junior/2nd		
	書報討論 Colloquium	2	Senior/1st		
群組必修 Compulsory for groups		專題研究(一) Special Topics (I)	1	From Sophomore to Senior/1st or 2nd	3
		專題研究(二) Special Topics (II)	1	From Sophomore to Senior/1st or 2nd	
		專題研究(三) Special Topics (III)	1	From Sophomore to Senior/1st or 2nd	
		專題研究(四) Special Topics (IV)	1	From Sophomore to Senior/1st or 2nd	
		理論力學(一) Theoretical Mechanics I	3	From Sophomore to Senior/2nd	
		電子學實驗(二) Experiments on Electronics (II)	2	From Sophomore to Senior/2nd	
		電磁學(三) Electromagnetism III	3	From Junior to Senior/1st	
		進階實驗物理 Advanced Experimental Physics	2	Junior/2nd	
		量子物理(二) Quantum Physics II	3	Junior/2nd	
		統計物理 Statistical Physics	3	Junior/2nd	
		物理數學(一) Mathematical Physics (I)	3	Senior/1st	
		物理數學(二) Mathematical Physics (II)	3	Senior//2nd	
		專題演講(一) Colloquia I	2	Sophomore/1st	
		專題演講(二) Colloquia II	2	Sophomore/ 2nd	
		物理英文 English for Physics	2	Sophomore/ 2nd	
		真空鍍膜技術 Vacuum Coating Technology	2	Sophomore/1st	
		光電實驗 Opto-Electronics Laboratory	2	Junior/2nd	
		計算物理 Computational physics	3	Senior/1st	
		進階應用電子學實驗Advanced Electronics Laboratory	2	Senior/1st	
		光電導論 Introduction to Optoelectronics	2	Junior/2nd	
		科學英文 English for Science	2	Sophomore/ 2nd	
		材料科學與工程導論 Materials Science and Engineering:An Introduction	3	Junior/2nd	
		應用光學(一) Applied Optics I	3	Junior/1st	
		應用光學(二) Applied Optics	3	Junior/2nd	
		低溫物理 Low Temperature Physics	2	Senior/1st	

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系選修課程 Department elective subject		圖形化積木式程式設計 Programming with Visual Building Blocks	2	Sophomore/1st	
		生醫光電導論 Introduction to Biophotonics	2	Junior/2nd	
		光纖雷射導論 Introduction to Fiber Lasers	2	Senior//2nd	
		固態光譜學	2	Junior/1st	
		電路學(一) Circuit Theory(I)	3	Sophomore/1st	
		高等粒子物理(二) Advanced Particle Physics (II)	3	Senior/1st	
		高等量子力學 Advanced Quantum Mechanics	3	Senior/1st	
		量子電腦概論 Introduction to quantum computer	2	Junior/2nd	
		半導體製程概論 Fundamentals of semiconductor fabrication	3	Junior/2nd	
		量子力學(一) Quantum Mechanics I	3	semster/1st	
		量子力學(二) Quantum Mechanics II	3	semster/2nd	
		固態物理(一) Solid State Physics (I)	3	semster/1st	
		固態物理(二) Solid State Physics (II)	3	semster/2nd	
		高等光電子學 Advanced Photonics	3	semster/2nd	
		統計力學 Statistical Mechanics	3	semster/2nd	
		光學薄膜 Optical Thin Films	3	semster/1st	
		色彩光學 Colorimetry in Optics	3	semster/2nd	
		雷射原理 Laser Physics	3	semster/1st	
		超快光學 Ultrafast Optic	3	semster/2nd	
		非線性光學 Nonlinear Optics	3	semster/1st	
		傅氏光學 Fourier Optics	3	semster/1st	
		生物物理 Biophysics	3	semster/2nd	
		高等實驗技術 Advanced Experimental Technology	3	semster/1st	
		光學設計 Optical Design	3	semster/2nd	
		半導體物理 Semiconductor Physics	3	semster/1st	
		粒子物理 Particle Physics	3	semster/2nd	
		電磁波輻射原理與應用 Principles and Applications of Electromagnetic Radiation	3	semster/1st	
		材料科學與應用 Materials Science and Engineering:An Introduction	2	semster/2nd	
		進階應用電子學實驗 Advanced Electronics Laboratory	2	semster/1st	
		太空物理 Space Physics	3	semster/2nd	
	理論力學(二) Theoretical Mechanics II	3	Junior/1st		