

國立高雄大學應用物理學系日間學制大學部專業課程必(選)修科目表  
**The Required Courses of the Undergraduate Curriculum,**  
**Department of Applied Physics, National University of Kaohsiung**

【113 學年度以後 (含) 日間學制大學部入學新生開始適用】

**For students admitted in the Academic Year 2024**

112 年 12 月 11 日本校 12 學年度第 1 學期第 1 次系課程委員會及 113 年 1 月 9 日 112 學年度第 1 學期第 5 次系務會議通過，112 年 11 月 02 日本校 112 學年度第 1 次院課程委員會通過，112 年 11 月 30 日本校 112 學年度第 1 次校課程委員會通過

Approved by the Department Curriculum Committee in its 1st meeting of the 1st semester for the 2023 academic year on December 11, 2023, and the 5th Department Affairs Meeting of the 1st semester for the 2023 academic year on January 9, 2024. Additionally approved by the College Curriculum Committee in its 1st meeting for the 2023 academic year on November 2, 2023, and by the University Curriculum Committee in its 1st meeting for the 2023 academic year on November 30, 2023.

課程名稱 Course Title	學分 Credits	第一學年 Year 1		第二學年 Year 2		第三學年 Year 3		第四學年 Year 4		備註 Notes
		上 S1	下 S2	上 S1	下 S2	上 S1	下 S2	上 S1	下 S2	
		微積分(一)(二) Calculus I II	6	3	3					
計算機概論 Introduction to Computer Science	3	3								
普通化學(一)(二) General Chemistry I II	6	3	3							
普通化學實驗(一)(二) Experiments of Chemistry I II	2	1	1							
普通物理學(一)(二) General Physics I II	6	3	3							
普通物理學演習(一)(二) General Physics Recitation I II	2	1	1							
普通物理實驗(一)(二) Experiments of Physics I II	2	1	1							
工程數學(一) Engineering Mathematics I	3		3							
工程數學(二) Engineering Mathematics II	3			3						
電磁學(一)(二) Electromagnetics I II	6			3	3					
理論力學(一) Mechanics I	3			3						
基礎物理實驗 Experiments of Fundamental Physics	2			2						
近代物理實驗 Experiments of Modern Physics	2				2					
量子物理(一)(二) Quantum Physics I II	6					3	3			
應用電子學(一) Applied Electronics I	3					3				

應用電子學實驗(一) Experiments of Applied Electronics I	2					2			
專題實作(一) Undergraduate Research Program I	1					1			
專題實作(二) Undergraduate Research Program II	3					3			

必修學分數合計 61 學分

The total number of required credits is 61 credits.

備註：

一、 最低畢業學分數 133 學分，含系必修 61 學分，系選修 30 學分，其它選修 10 學分，校定必修「中文」4 學分、「英語會話與閱讀」4 學分，「服務學習培養 A、B」0 學分，「體育（一）（二）（三）（四）」0 學分，通識選修 24 學分。

The minimum graduation requirement is 133 credits, which includes 61 credits of department-required courses, 30 credits of department elective courses, and 10 credits of other electives. Additionally, university-mandated courses comprise 4 credits in "Chinese," 4 credits in "English Conversation and Reading," 0 credits in "Service Learning (A and B)," 0 credits in "Physical Education I, II, III, and IV," and 24 credits in General Education electives.

二、 本系必選課程定義如下：

Definition of Required Elective Courses in this Department:

課程修習類別 Course Enrollment Category	意義 Definition			
	是否須修習 Is Enrollment Required?	成績是否須及格 Does the Grade Need to be Passing?	學分數 是否須取得 Is Credit Acquisition Required?	學分數 是否列入最低畢業 學分數 Do Credits Count Toward Minimum Graduation Requirement?
必選 Required Elective	■是 YES	■否 NO	■否 NO	■是 YES

三、 本系必選課程：

「近代物理導論」：3 學分，原則上大二下開設。

「物理數學」：3 學分，原則上大二下開設。

「熱統計物理學」：3 學分，原則上大三上開設。

「電路學(一)」：3 學分，原則上大二上開設。

Required Elective Courses in Our Department:

"Introduction to Modern Physics": 3 credits, typically offered in the second semester of the sophomore year.

"Mathematical Methods in Physics": 3 credits, typically offered in the second semester of the sophomore year.

"Statistical Thermodynamics": 3 credits, typically offered in the first semester of the junior year.

"Circuit Theory (I)": 3 credits, typically offered in the first semester of the sophomore year.

四、 本校日間學制大學部畢業前應通過之基本能力檢核：

(一) 英文能力畢業資格檢定(依本校「英文能力畢業資格檢定實施辦法」)。

(二) 資訊能力畢業資格檢定(依本校「資訊基本能力畢業資格檢定實施辦法」)。

Basic Competency Assessments Required for Graduation from the University's Day Division Undergraduate Program:

(1) English Proficiency Graduation Requirement (in accordance with the university's "English Proficiency Graduation Requirement Implementation Guidelines").

(2) Information Technology Proficiency Graduation Requirement (in accordance with the university's "Basic Information Technology Proficiency Graduation Requirement Implementation Guidelines").

五、 依本校「專業應用型法律課程開設、學分採認及畢業條件辦法」規定，本系承認專業應用型法律課程為：「科技法學素養(A)或(B)，各 2 學分」，本課程必須修習且成績及格。

According to the university's "Regulations on the Offering, Credit Recognition, and Graduation Requirements for Professional Applied Law Courses," our department recognizes the following professional applied law courses: "Technology Law Literacy (A)" or "Technology Law Literacy (B)," each worth 2 credits. These courses must be completed with a passing grade.

六、 本學系最低畢業學分數“含”專業應用型法律課程之學分，屬本系其它選修 10 學分內。

The minimum graduation credit requirement for our department includes the credits from the professional applied law courses, which are counted within the department's other elective credits (10 credits).

應用物理學系大學部、碩士班之專業選修課程

Department of Applied Physics — Elective Courses for Undergraduate and Graduate Programs

開課學制、年級 Program / Grade	學分數 Credits	課程名稱 Course Name
<b>本系專業選修課程</b>		
大一、大二 Freshman, Sophomore	3	科學實作(上學期) Scientific Practice (First semester)
大一、大二 Freshman, Sophomore	3	程式設計(下學期) Programming (Second semester)
大二 Sophomore	3	光電導論(下學期) Introduction to Electro-Optics (Second semester)
大二 Sophomore	3	電路學 II (下學期) Circuit II (Second semester)
大二 Sophomore	3	理論力學 II (下學期) Mechanics II (Second semester)
大三 Junior	各 3 3each	光學 I II Optics I II
大三 Junior	3	電磁波(上學期) Electromagnetic Wave (First semester)
大三 Junior	3	應用電子學 II(下學期) Applied electronics II (Second semester)
大三 Junior	3	應用電子學實驗 II(下學期) Experiments of Applied Electronics II (Second semester)
大三 Junior	3	平面顯示器概論(下學期) Introduction to Flat Panel Displays (Second semester)
碩一、碩二合開 Master Year 1 & 2	3	發光二極體特論及實驗(上學期) Special Topics and Experiments of Light Emitting Diodes (First semester)
碩一、碩二合開 Master Year 1 & 2	3	同步輻射應用概論(上學期) Introduction to Synchrotron Radiation Applications (First semester)
碩一、碩二合開 Master Year 1 & 2	3	太陽能光電(上學期) Solar cells (First semester)
碩一、碩二合開 Master Year 1 & 2	3	量子物理 III(上學期) Quantum Physics III (First semester)

開課學制、年級 Program / Grade	學分數 Credits	課程名稱 Course Name
碩一、碩二合開 Master Year 1 & 2	3	磁性薄膜材料與元件(下學期) Magnetic Film Materials and Devices (Second semester)
碩一、碩二合開 Master Year 1 & 2	3	掃描探針顯微術(下學期) Scanning Probe Microscopes(Second semester)
碩一、碩二合開 Master Year 1 & 2	各 3 3each	科技英文 I II English for Science and Technology I II
碩一、碩二合開 Master Year 1 & 2	各 3 3each	半導體元件與物理 I II Physics of Semiconductor Devices I II
碩一、碩二合開 Master Year 1 & 2	各 3 3each	固態物理 I II Solid State Physics I II
<b>學術物理人才類別/ Academic Physics Talent Category</b>		
碩一、碩二合開 Master Year 1 & 2	各 3 3each	量子力學 I II Quantum Michanics I II
<b>薄膜物理類別/ Thin Film Physics Category</b>		
大三上 Junior	3	真空技術(上學期) Vacuum Technology (First semester)
碩一、碩二合開 Master Year 1 & 2	3	磁性物理(上學期) Magnetic Physics (First semester)
碩一、碩二合開 Master Year 1 & 2	3	薄膜物理(下學期) Physics of Thin Films (Second semester)
<b>材料分析類別/ Material Analysis Category</b>		
大三上 Junior	3	X-光物理(上學期) X-ray Physics (First semester)
碩一、碩二合開 Master Year 1 & 2	3	材料性質量測與分析(上學期) Material Characterization and Analyses (First semester)
<b>光電能源類別/ Optoelectronics and Energy Category</b>		
碩一、碩二合開 Master Year 1 & 2	3	太陽能光電(上學期) Solar cells (First semester)
碩一、碩二合開 Master Year 1 & 2	3	半導體製程與設備(上學期) Semiconductor Processing and Equipment (First semester)
碩一、碩二合開 Master Year 1 & 2	3	綠色能源(下學期) Green Energy (Second semester)

開課學制、年級 Program / Grade	學分數 Credits	課程名稱 Course Name
碩一、碩二合開 Master Year 1 & 2	3	應用光譜學(下學期) Applied Spectroscopy (Second semester)
碩一、碩二合開 Master Year 1 & 2	3	有機電致發光二極體(下學期) Organic Light Emitting-Diodes (Second semester)