

國立陽明交通大學 醫學生物技術暨檢驗學系 必選修科目表

(113 學年度入學新生適用)

List of Courses for Department of Biotechnology and Laboratory Science in Medicine  
in NYCU

(Applicable to Newly-Admitted Students from Academic Year 2024)

一、系訂必修課程 Required courses

課程名稱 Course Name	學分 Credit	一年級 Grade 1		二年級 Grade 2		三年級 Grade 3		四年級 Grade 4		備註
		上 1st	下 2nd	上 1st	下 2nd	上 1st	下 2nd	上 1st	下 2nd	
普通生物學 General Biology	3	3								EMI 授課
普通生物學實驗 Laboratory Studies of Biology	1	1								
化學實驗(一) Experiments for Chemical Principle	1	1								
化學原理 Principles of Chemistry	2	2								
程式設計 Programming	2	2								遠距
分析化學 Analytical Chemistry	2		2							
組織學 Histology	2		2							
組織學實驗 Histology Laboratory	1		1							
有機化學 Organic Chemistry	3		3							
有機化學實驗 Laboratory in Organic Chemistry	1		1							
資料科學基礎 Fundamentals of Data Science	2		2							
解剖學 Anatomy	3			3						
寄生蟲學 Parasitology	2			2						
寄生蟲學實驗 Parasitology Lab.	1			1						
生物化學 Biochemistry	4			4						
生物化學實驗 Biochemistry Lab.	1			1						
臨床鏡檢學 Introduction to Clinical Microscopy	1				1					
臨床鏡檢學實驗 Introduction to Clinical Microscopy Lab.	1				1					
生理學 Physiology	4				4					
生理學實驗 Physiology Lab.	1				1					
分子生物學 Molecular Biology	2				2					
細胞生物學 Cell Biology	1				1					
微生物學及免疫學 Microbiology & Immunology	4					4				
微生物學及免疫學實驗 Lab Practice in Microbiology & Immunology	1					1				
病理學 Pathology	2					2				

血液學及臨床血液學 Hematology and Clinical Hematology	3					3			
血液學及血庫學實驗 Hematology and Blood Banking Lab.	2					2			EMI 授課
血庫學 Blood Banking	1						1		
臨床微生物實驗 Clinical Microbiology Laboratory	1						1		EMI 授課
臨床生化學 Clinical Biochemistry	2						2		
臨床生化學實驗 Clinical Biochemistry Lab.	1						1		EMI 授課
臨床細菌學 Clinical Bacteriology	2						2		
臨床病毒學 Clinical Virology	1						1		
臨床血清免疫學 Clinical Serology & Immunology	2						2		
臨床生理學 Clinical Physiology	2						2		
細胞診斷學 Diagnostic Cytology	1						1		
醫學檢驗法規與品質管理(I) Regulations and Quality management in Medical Laboratory Sciences(I)	1						1		
臨床微生物學實習 Clinical Microbiology Lab Internship	3							3	
臨床生化學實習 Clinical Biochemistry Practice Lab Internship	3							3	
臨床生理學實習 Clinical Physiology Practice Lab Internship	1							1	
臨床鏡檢及寄生蟲學實習 Clinical Microscopy & Parasitology Lab Internship	3							3	
臨床病毒學實習 Clinical Virology Lab Internship	2							2	
臨床血庫實習 Clinical Blood Banking Lab Internship	1							1	
臨床血清免疫實習 Clinical Serology Lab Internship	1							1	
臨床血液學實習 Clinical Hematology Lab Internship	1							1	
醫學分子檢驗實習 Molecular Diagnosis in Medicine Lab Internship	2							2	
病理切片及細胞診斷實習 Pathological Technology & Diagnosis Cytology Practice	1							1	
專題討論 Research Seminar	1								1 EMI 授課
醫學分子檢驗 Molecular Diagnosis in Medicine	2								2

專題研究 Capstone Project	1								1	
醫學檢驗法規與品質管理(II) Regulations and Quality management in Medical Laboratory Sciences (II)	1								1	
小計	90	9	11	11	10	12	14	18	5	

## 二、系選修課程 Elective courses

課程名稱 Course Name	學分 Credit	一年級 Grade 1		二年級 Grade 2		三年級 Grade 3		四年級 Grade 4		備註
		上 1st	下 2nd	上 1st	下 2nd	上 1st	下 2nd	上 1st	下 2nd	
生技與醫檢(一)Biotechnology and Laboratory Sciences(I)	2	2								EMI 授課
微積分 Calculus	2	2								
普通物理學 General Physics	3	3								
普通物理學實驗 General Physics Lab.	1	1								
微積分(二) Calculus (II)	2		2							
統計學 Statistics	2		2							
解剖學實驗 Anatomy Lab.	1			1						
生物醫學研究導論 Introduction to Research in Biomedical Sciences	1			1						EMI 授課
專題討論 Research Seminar	1			1						EMI 授課
公共衛生學概論 Public Health	2			2						
統計學 Statistics	2				2					
生物資訊學 Bioinformatics	3					3				
環境衛生學 Environmental Health	2					2				
環境毒理學 Environmental Toxicology	2					2				
藥理學概論 Introduction of Pharmacology	1						1			
流行病學 Epidemiology	1						1			
毒物化學 Toxicology	2						2			
實驗室自動化實習 Total Lab Automation Internship	1							1		
心臟超音波檢查室實習 Echocardiography practice	1							1		
電子顯微鏡應用實習 Applications of Electron Microscopy	1							1		
小兒遺傳學檢驗實習 Pediatric Genetics analysis	1							1		
骨髓染色體分析實習 Bone marrow chromosome analysis	1							1		
毒物化學實習 Clinical toxicology chemistry	1							1		

細胞學實習 Cytology practice	1							1		
衛生檢驗實習(一)食品化學檢驗 The hygienic examination practice (I) The food chemistry examination	1							1		
衛生檢驗實習(二)中藥西藥成分檢驗 The hygienic examination practice (II) The examination for adulterant component in Chinese herbal medicine	1							1		
衛生檢驗實習(三)食品中微生物檢驗 The hygienic examination practice (III) The microorganism in food	1							1		
疾病管制實習 Disease Control Internship	1							1		
藥理學 Pharmacology	3								3	
藥理學概論 Introduction of Pharmacology	1								1	
流行病學 Epidemiology	1								1	
毒物化學 Toxicology	2								2	
寡核酸之應用 The Applications of Oligonucleotide	1								1	
人工輔助生殖技術講座 Assisted Reproductive Technology (ART)	2								2	
醫學昆蟲與病媒防制 Medical Insect and Vector Control	2								2	
統計學 Statistics	2								2	

**說明：**

一、 本學系最低畢業學分為 136 學分，包含：

The minimum number of credits required for graduation from this department is 136 credits, including:

(一) 校共同課程至少 24 學分

At least 24 credits in University Common Courses

1. 核心課程：根據本校核心課程修習辦法辦理，至少修畢 18 學分，其中基本素養課程至少 6 學分，領域課程至少 8 學分。

Core Courses: according to the university's core curriculum regulations, at least 18 credits must be completed, including at least 6 credits in fundamental literacy courses and at least 8 credits in domain courses.

2. 語言與溝通課程：根據本校語言與溝通課程修習辦法辦理，至少修畢 6 學分，其中英文課程至少 4 學分。

Language and Communication Courses: according to the university's language and communication curriculum regulations, at least 6 credits must be completed, including at least 4 credits in English courses.

3. 其他必修：

Other required courses:

(1) 體育課程 0 學分，6 學期，依本校體育課程實施辦法辦理。

Physical Education Courses: 0 credits, 6 semesters, in accordance with the university's physical education course implementation regulations

(2) 服務學習課程：依本校服務學習課程實施辦法辦理，需修畢通過二門「基礎服務學習課程」或一門「專業服務學習課程」。

Service Learning Courses: in accordance with the university's service learning course implementation regulations, students must complete and pass either two "Basic Service Learning Courses" or one "Professional Service Learning Course."

- (3) 學生學術及研究倫理教育課程：依本校學生學術研究倫理教育課程實施要點辦理。  
Student Academic and Research Ethics Education Courses: in accordance with the university's student academic and research ethics education course implementation guidelines
- (4) 性別平等教育線上課程：依本校性別平等教育線上課程實施要點辦理。  
Online Gender Equality Education Courses: in accordance with the university's online gender equality education course implementation guidelines
- (5) 導師時間：依本校導師制度實施辦法辦理。  
Mentor Time: in accordance with the university's mentor system implementation regulations

(二) 系訂必修課程 90 學分；系選修課程 18 學分；自由彈性選修 0 學分。

Department-required courses: 90credits; department elective courses:18credits; free elective courses: 0 credits

二、選修課程以當學期開課資料為準。

Elective courses are based on the course offered for the current semester.