國立陽明交通大學 生命科學系暨基因體科學研究所(生醫光電與資訊組)

必選修科目表 (114學年度入學新生適用)

List of Courses for Department of Life Sciences and Institute of Genome Sciences (Biophotonics and Informatics) in NYCU

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

一、系訂必修課程 Required courses

課程名稱	學分	一年級 Grade 1			手級 de 2	三年級 Grade 3		四年 Gra	手級 de 4	
Course Name	Credit	上 1st	下 2nd	上 1st	下 2nd	上 1st	下 2nd	上 1st	下 2nd	備註
微積分(一)			Ziiu	131	Ziiu	131	Ziiu	131	Ziiu	
Calculus(I)	2	2								
微積分(二)	2		2							
Calculus(II)	Z		2							
普通物理學(一)	2	2								
General Physics(I)	2									
普通物理學(二)	2		2							
General Physics(II)	2		2							
物理學實驗	1		1							
Physics Laboratory	1		1							
生命科學總論(上)	2	2								
General Biology,1st semester										
生命科學總論(下)	2		2							
General Biology, 2nd semester										
生命科學實驗 Life Science Laboratory	2	2								
遺傳學原理的實作與應用										
Laboratory in Fundamental	2		2							
Genetics and its Applications	_		_							
化學原理(一)	2	2								
Principles of Chemistry(I)	2									
化學原理(二)	2		2							
Principles of Chemistry(II)	2		2							
化學原理實驗	1	1								
Chemical Principle Lab	1	1								
有機化學	3		3							
Organic Chemistry	3		3							
計算機概論										
Introduction to Computer	2	2								
Science										
抽象思考與演算法	2		2							
Abstraction and Algorithms	2									
生涯發展與學習(一上)										
Career Development and	1	1								
Preparation I, 1st Semester										
生涯發展與學習(一下)										
Career Development and	1		1							
Preparation I, 2nd Semester										
模擬系統與數據分析				_						
Simulation Models and Data	2			2						
Analysis							<u> </u>			

	1			1	ı		ı	ı	1
量化數據分析 Quantitative data analysis	2			2					
生物化學									
Biochemistry	4		4						
細胞生物學									
Cell Biology	2		2						
生理學									
Physiology	3			3					
生物統計學	_			_					
Introduction to Biostatistics	2			2					
研究室實務訓練									上或下學期
Laboratory Practical Training	2		2	2					擇一修習
生化及細胞生物學實驗									
Biochemistry & Cell Biology	2			2					
Laboratory									
有機化學實驗									
Laboratory in Organic	1		1						
Chemistry 生涯發展與學習(二上)									
生涯發展共享自(一工) Career Development and	1		1						
Preparation II, 1st Semester	1		1						
生涯發展與學習(二下)									
Career Development and	1			1					
Preparation II, 2nd Semester									
•發育生物學	3				3				12 選 3 課程
Developmental Biology	3				3				12 送 3 酥柱
•結構生物學(一)	2				2				12 選 3 課程
Structural Biology(I)	_				_				32 10 27 112
•遺傳學概論	3				3				12 選 3 課程
Introductory Genetics									
•生物資訊學	2				2				12 選 3 課程
Introduction to Bioinformatics									
•神經生物學	3				3				12 選 3 課程
Neurobiology									
•基礎免疫學	2				2				12 選 3 課程
Basic Immunology									
•生物學特論(一)	2				2				12 選 3 課程
Honor Biology I									
•生物學特論(二) Honor Biology II	2					2			12 選 3 課程
•演化遺傳學與醫學									
Evolutionary Genetics and	2					2			12 選 3 課程
Medicine									
•基因分子生物學	3					3			12 選 3 課程
Molecular Biology of the Gene									12200年
•工程數學	3				3				12 選 3 課程
Engineering Mathematics									
•線性代數 Linear Algebra	3				3				12 選 3 課程
科學文獻研讀與分析(上)									
Scientific literature reading and	2				2				
analysis I									
科學文獻研讀與分析(下)									
Scientific literature reading and	2					2			
analysis II									
論文閱讀與分析方法(上)	1						1		

Paper Reading and Analysis,1st semester										
論文閱讀與分析方法(下) Paper Reading and Analysis,2nd semester	1								1	
體育 physical Education	0	0	0	0	0	0	0			
導師時間 Class Meeting	0					0	0	0	0	
必修學分 Required credits	65	14	17	12	12	25	9	1	1	

二、系選修課程 Elective courses

課程名稱	學分	一年級 Grade 1		二年級 Grade 2		三年級 Grade 3		四年級 Grade 4		ma v
Course Name	Credit	上 1st	下 2nd	上 1st	下 2nd	上 1st	下 2nd	上 1st	下 2nd	備註

說明 Explanation:

一、 本學系最低畢業學分為 <u>128</u>學分,包含:

The minimum number of credits required for graduation from this department is 128 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 $\frac{6}{9}$ 学分,其中英文課程至少 $\frac{4}{9}$ 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,<u>6</u>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 65 學分; 系選修課程 0 學分; 自由彈性選修 39 學分。

Department-required courses: $\underline{65}$ credits; department elective courses: $\underline{0}$ credits; free elective courses: $\underline{39}$ credits 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.