

# 生物資訊 學分學程實施辦法

## Bioinformatics Interdisciplinary Program

- 一、為提供學生跨學域並具整合性之選課環境，特訂定本生物資訊學程，其主要在於整合生科、資科工等不同學域內之課程，培養具有此類專長基本訓練之學生。

The Bioinformatics Interdisciplinary Program is designed to provide students with an integrated learning environment that crosses traditional boundaries of academic disciplines. The goal of the program is to integrate the curricula of different academic fields such as Biological science & technology and Computer science to cultivate students with related training and skills.

- 二、凡本校學生，均得申請修讀本學程，修滿本學程規定之科目及學分者，由本校發給學程修畢證明。All students in NCTU can apply for this program. Students who fulfill the program requirements will be granted with certifications issued by NCTU.

- 三、本學程由生科學院及電機資訊學院共同規劃，生物科技系所、資訊科學系所、資訊工程系所及統計所所提供課程。

The program is proposed by the College of Biological Science & Technology and the College of Computer Science. All program courses are offered by the Department of Biological Science and Technology, Department of Computer Science, Institute of Computer Science and Engineering and Institute of Statistics.

- 四、本學程之學分規定：1).需修滿下列必(選)修課程達 24 學分(含)以上。2).必修核心課程為 9 學分，並且所修學分至少有 9 學分不屬於學生主修科目。3).生物核心課程及資訊核心課程各至少修 3 學分。4).選修課程為 15 學分，其中所修學分至少有 6 學分不屬於學生原主修科目。

The required credits on this program include: (1) at least 24 credits of the required (or elective) courses listed below; (2) 9 credits of core courses, and at least 9 credits of which doesn't include in the student's major courses; (3) At least 3 credits of each from bio core courses and computer science courses; (4) 15 credits of elective courses, and at least 6 credits of which doesn't include in the student's major courses.

### 學分學程課程規劃表

#### Interdisciplinary Program Course List

- 一、學程名稱：生物資訊 (Bioinformatics)

- 二、課程名稱及開課系所：

Courses and the departments which offer the courses:

**必修核心課程** Mandatory

	科目名稱 Courses	學分數 Credit	學期 Term	開課系所	建議先修課程 Recommended prerequisites
生物 核心 課程	普通生物學(一) General Biology(I)	3	上(二選一) Fall Term (Choose one)	生科等系所	普通生物學 (一) General Biology(I)
	基因體簡介 Int. to genomics	3			
Biology related Core courses	生物化學(一) Biochemistry(I)	3	下 Spring Term	生科等系所	
	分子生物學 Molecular Biology	3	上 Fall Term	生科等系所	
資訊 核心 課程 Informatics core courses	程式設計 Programming	3	上 Fall Term	資科等系所	計算機概論 Int. to Computer Science
	資料結構 Data structures	3	上 Fall Term	資科等系所	
	統計學 Statistics	3	上 or 下 Fall or Spring Term	統計等系所	
	計算生物學	3	下 Spring Term	生科等系所	

	Computational Biology	3	上 Fall Term (三選一) (choose one)	資科等系所
	生物資訊 Bioinformatics			

### 選修課程 Elective Courses

課程名稱 Course	學分數 Credit	學期 Term	開課系所	建議先修課程 Recommended prerequisites
普通生物學(二) General Biology(II)	3	下 Spring Term	生科等系所	
生物化學(二) Biochemistry(II)	3	上 Fall Term	生科等系所	
生物分子模擬概論 Introduction to Bio-Molecular Simulation	3	下 Spring Term	生科等系所	
遺傳學 Genetics	3	下 Spring Term	生科等系所	
生物資訊應用 Applications of Bioinformatics	3	上 Fall Term	生科等系所	
演算法 Algorithms	3	上 or 下 Fall or Spring Term	資科等系所	資料結構 Data structures
網路程式規劃 Network Programming	3	下 Spring Term	資科等系所	
資料庫管理系統 Database Management Systems	3	上 Fall Term	資科等系所	

三、召集人姓名：楊進木（生科系）、孫春在（資科系）

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Prof. Yang-Tung Huang (Dept. of Computer Science)

四、聯絡人姓名：胡毓志（資科系）、楊進木（生科系）、荊宇泰（資工）、洪志真（統計所）

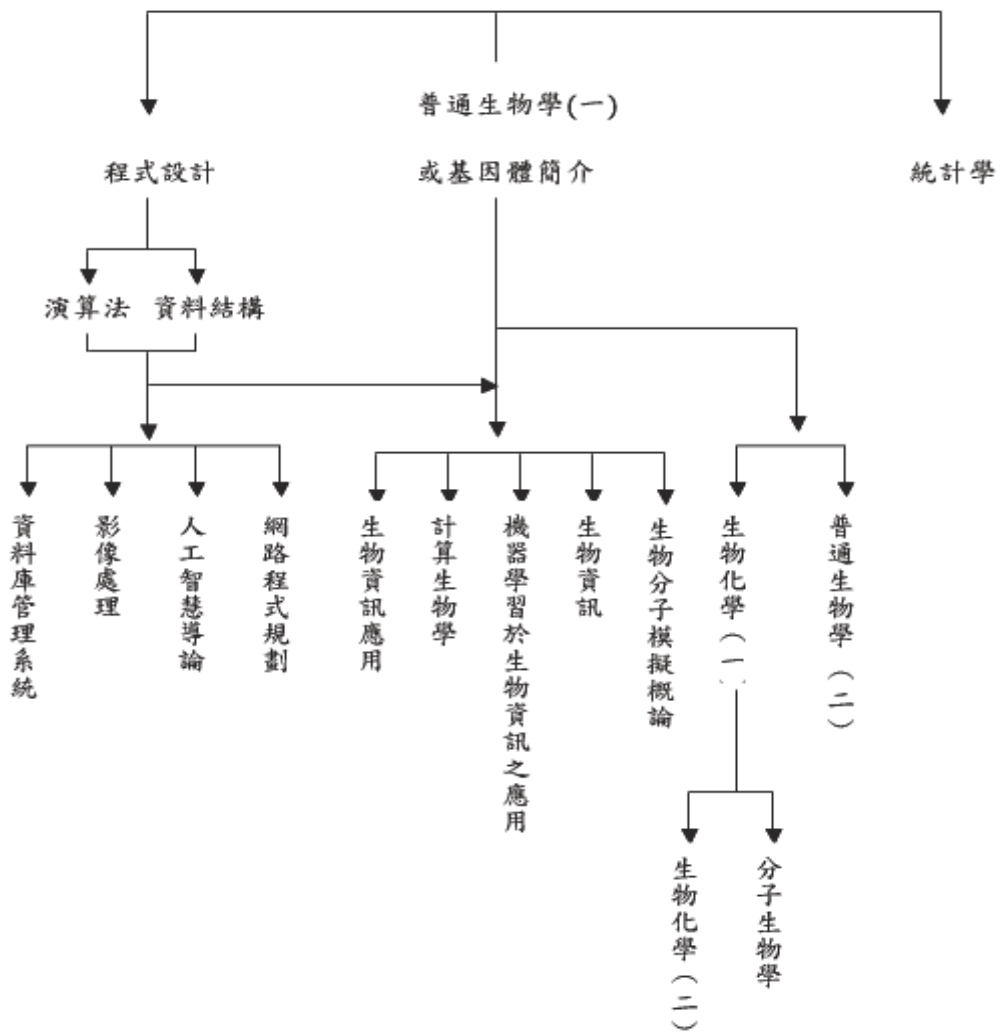
Contact: \_\_\_\_\_ (Dept. of Computer Science)

Jinn-Moon Yang (Dept. of Biological Science and Technology)

Yu-Tai Ching (Institute of Computer Science and Engineering)

Jyh-Jen Horng Shiau (Institute of Statistics)

※建議先修課程如為空白，請參考生物資訊學程修課路徑建議圖。



生物資訊學程修課路徑建議圖