

Bioinformatics

Course List

I. School Package for the School of Science and Engineering

Course Code	Course Title (English)	Course Title (Chinese)	Unit(s)	
BIO2001	General Biology	普通生物	3	
CHM1001	General Chemistry	普通化學	3	
CSC1001	Introduction to Computer Science: Programming	計算機科學導論：程序設 計方法	3	
CSC1002	Computational Laboratory	計算機實驗	1	
Option A*	MAT1001	Calculus I	微積分（一）	3
	MAT1002	Calculus II	微積分（二）	3
Option B*	MAT1003	Mathematical Analysis I	數學分析（一）	3
	MAT1004	Mathematical Analysis II	數學分析（二）	3
MAT2040	Linear Algebra	線性代數	3	
PHY1001	Mechanics	力學	3	
STA2001	Probability and Statistics I	概率及統計（一）	3	

*Students must complete either Option A or Option B.

II. Major Required Courses

Course Code	Course Title (English)	Course Title (Chinese)	Unit(s)
CSC4008	Techniques for Data Mining	數據挖掘技術	3
CSC4020	Fundamentals of Machine Learning	機器學習之基礎課程	3
CSC4120	Design and Analysis of Algorithms	算法設計及分析	3
GNB2001	Molecular Biology and Biochemistry	分子生物學和生物化學	3
GNB2002	Cell Biology	細胞生物學	3
GNB2003	Genetics	遺傳學	3
GNB2005	Computational Biology	計算生物學	3
GNB3001	Bioinformatics	生物信息學	3
GNB3002	Genetic Engineering	基因工程學	3
MAT3300	Mathematical Modelling	數學建模	3

III. Major Elective Courses

Course Code	Course Title (English)	Course Title (Chinese)	Unit(s)
BIO2032	Biology Laboratory	生物學實驗	1
CSC3002	Introduction to Computer Science: Programming	計算機科學導論：程序設計範式	3
GNB2004	Genetics Laboratory	遺傳學實驗	2
GNB3003	Protein Structure Analysis and Proteomics	蛋白質結構分析和蛋白質組學	3
GNB3004	Animal Physiology	動物生理學	3
GNB3005	Biochemistry and Cell Biology Laboratory	生物化學和細胞生物學實驗	2
GNB3006	Macromolecules and Molecular Pharmacology	大分子功能調節和分子藥理學	3
GNB4001	Frontier Life Science Topics and Reviews	生物科學前沿講座與文獻綜述	3
GNB4003	Student Research and Innovation	學生科技創新項目	3
GNB4005	Research Internship	研究實習	3
STA2002	Probability and Statistics II	概率及統計（二）	3
STA3006	Design and Analysis of Experiments	實驗設計與分析	3