

生物科技學系跨域模組課程 必修科目表 (B)

The Required Course List for the students study cross-disciplinary module curriculum in Department of Biological Science and Technology

類別 Category	科目名稱 Course Name	學分 Credit	開課系所 Department	備註 Remark
(一)生物科技跨域模組 (共 32 學分) (I) Cross-disciplinary modules at Department of Biological Science and Technology (32 credits)	化學 Chemistry	3	生科系 Department of Biological Science and Technology	必修 24 學分 Core curriculum 24 credits 註:普通生物學及近代生物學二擇一 <u>General Biology</u> 、 <u>Modern Biology</u> (choose one courses out of the two)
	普通生物學(一)(二) General Biology(I) (II)	3+3	或經系課程委員會認定同意	
	近代生物學(一)(二) Modern Biology(I) (II)	3+3	Or be approved by the Curriculum Committee	
	有機化學(一) Organic Chemistry(I)	4		
	生物化學(一) Biochemistry (I)	3		
	分子生物學(一) Molecular Biology (I)	3		
	細胞生物學(一) Cell Biology (I)	2		
	遺傳學 Genetics	3		
修畢於畢業證書加註『跨域專長：生物科技』 It could be remarked as “Cross-Disciplinary Specialty : Biological Science and Technology” on the diploma after the module curriculum is completed.	微生物學 Microbiology	3	生科系 Department of Biological Science and Technology	左列課程 至少選 8 學分 at least 8 credits are required
	生物化學(二) Biochemistry (II)	3	或經系課程委員會認定同意	
	分子生物學(二) Molecular Biology (II)	3	Or be approved by the Curriculum Committee	
	細胞生物學(二) Cell Biology (II)	2		
	免疫學 Immunology	3		
	病毒學 Virology	3		
	神經生物學 (一) Neurobiology (I)	2		
	神經生物學 (二) Neurobiology (II)	2		
	腫瘤生物學 Oncology	3	分醫所 Institute of Molecular Medicine and Bioengineering	
	生物科技之專利趨勢分析 Patent Analysis of Biotechnology	3	或經系課程委員會認定同意 Or be approved by the Curriculum Committee	
生物科技跨域模組 總學分 Cross-disciplinary modules at Department of Biological Science and Technology Total Credits		32		

類別 Category	科目名稱 Course Name	學分 Credit	開課系所 Department	備註 Remark
<p>(二)分子醫學與生物工程跨域模組 (共 28 學分) (II) Cross-disciplinary modules of Molecular Medicine and Bioengineering at Department of Biological Science and Technology (28credits)</p> <p>修畢於畢業證書加註『跨域專長：分子醫學與生物工程』 It could be remarked as “Cross-Disciplinary Specialty : Molecular Medicine and Bioengineering” on the diploma after the module curriculum is completed.</p>	普通生物(一)(二) General Biology (I)(II)	6	生科系 Department of Biological Science and Technology	必修 18 學分 Core curriculum 18 credits
	近代生物學(一)(二) Modern Biology (I)(II)	6	或經系課程委員會認定	<u>註:普通生物學及近代生物學二擇一</u>
	生物化學(一)(二) Biochemistry(I)(II)	6	同意	<u>General Bioiogy、</u>
	分子生物(一)(二) Molecular Biology (I) (II)	6	Or be approved by the Curriculum Committee	<u>Modern Biology (choose one courses out of the two)</u>
	細胞生物(一) Cell Biology (I)	2	生科系 Department of Biological Science and Technology	左列課程 至少選 10 學分 At least 10 credits are required
	細胞生物(二) Cell Biology (II)	2	或經系課程委員會認定	
	免疫學 Immunology	3	同意	
	微生物學 Microbiology	3	Or be approved by the Curriculum Committee	
	結構生物學 Structural Biology	3		
	遺傳學 Genetics	3		
	代謝工程應用於再生能源與材料 Metabolic Engineering for Renewable Fuel and Chemicals	3		
	人體生理學 Human Physiology	3	分醫所	
	腫瘤生物學 Oncology	3	Institute of Molecular Medicine and Bioengineering	
	細菌致病機制 Bacterial Pathogenesis	2	或經系課程委員會認定	
	高等生物工程 Advanced Bioengineering	2	同意	
	高等分子醫學 Advanced Molecular Medicine	2	Or be approved by the Curriculum Committee	
組織學 Histology	3			
轉譯醫學：病理學 Translational Medicine: Pathology	2			
神經工程 Neural Engineering	3	生資所 Institute of		

	<p>生物機器學習 Machine Learning in Computational Biology</p>	3	<p>Bioinformatics and Systems Biology 或經系課程委員會認定 同意 Or be approved by the Curriculum Committee</p>	
<p>分子醫學與生物工程跨域模組 總學分 Cross-disciplinary modules of Molecular Medicine and Bioengineering at Department of Biological Science and Technology Total Credits</p>		28		