

輔仁大學 111學年度 學士班 必選修科目表

Bachelor's degree Curriculum plan of Academic Year 111 in Fu Jen Catholic University

院別College：理工學院College of Science and Engineering

系列Department：

醫學資訊與創新應用學士學位學程Bachelor's Program in Medical Informatics and Innovative Applications

Type	Module	Course Title	Credits	Select	prescribed credits	first grade first semester	second grade second semester	third grade first semester	fourth grade second semester	first semester	second semester	first semester	second semester	minimum required	minimum number of	Remark
校訂 Courses Required by the University		導師時間 Time for Class Advisor	02795	R	0	0	0	0	0	0	0	0	0	0	0	
		全民國防教育軍事訓練 All-out Defense Education Military Training	21020	R	0	0	0							0	0	
H o l i s t i c 全 人 教 育 課 程 Fundamental Courses	核心課程 Core Abilities Courses	大學入門 Introduction to University Studies	00155	R	2	2								8		
		人生哲學 Philosophy of Life	00007	R	4				2	2						
		專業倫理-科技倫理 Professional Ethics-Scientific and Technology Ethics	08199	R	2						2					
		體育Physical Education		R	0	0	0	0	0							
		國文Chinese	00001	R	4	2	2									
	基本能力課程 Fundamental Courses	外國語文 Foreign Language		R	8	2	2	2	2					32	12	Those who have at least 4 credits in English, but who meet a certain standard in the entrance examination or certification, may be exempted from taking freshman English and take a second foreign language course.
		資訊素養 Information Literacy		R	0											There will be no compulsory courses for the whole school. Instead, students will need to pass the school's basic information competency test as a graduation condition. The test method will be through certification or taking relevant courses as a credit.
	通識涵養課程 General Education Courses	人文與藝術通識領域 Humanities & Arts		G	4									12		
		自然與科技通識領域 Nature & Technology		G	4											
		社會科學通識領域 Social Sciences		G	4											
院 系 必 修 課 程 Den	C F o n u t r a d e s 基礎核心課程	微積分(一) Calculus I	02391	R	3	3								9	9	
		程式設計(一) Computer programming I	18630	R	3	3										
		人工智慧概論 Introduction of Artificial	04784	R	3			3								
	A b i l i t i e s 冷門科目	微積分(二) Calculus II	02392	R	3		3							21	21	Need to pass Calculus (I) to take courses
		計算機概論 Introduction to Computer Science	01863	R	3	3										
		資料結構 Data Structures	02492	R	3			3								
		演算法 Algorithms	04619	R	3			3								
		機率與統計 Probability and Statistics	02800	R	3			3								
		程式設計(二) Computer Programming II	16171	R	3		3									Need to pass Computer Programming I to take courses
		網路概論 Introduction to Computer	08029	R	3					3						

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Part Required	資訊工程之基礎 Fundamentals of Information Engineering	資料庫概論 Introduction to Data Base	02489	R	3				3					6		
		物件導向分析與設計 Object-oriented Analysis and Design	23166	R	3						3					
	醫院實務之基礎 Fundamentals of Hospital Practice	醫學資訊概論 Introduction to Health Sciences Information	32435	R	3	3								14		
		醫療標準及術語 Medical Standards and	23186	R	2		2									
		電子病歷 Electronic Medical Records	23187	R	3			3								
		醫療資訊系統實務 Medical Information Systems Practice	23189	R	3				3							
		醫療決策分析 Medical Decision Analysis	23190	R	3					3						
	創新應用 Innovative Applications	行動裝置程式設計 Mobile Device Programming	23192	R	3			3						22		
		專題(一) Research Project (I)	05597	R	2					2						
		專題(二) Research (II)	05598	R	2						2					
		雲端健康照護 Cloud-based Healthcare	23195	R	3						3					
		智慧穿戴技術與應用 Smart Wearable Technologies and Applications	24313	R	3					3						
		產業實習Internship	13859	R	9								9			
		醫資講座 Lectures in Medical Informatics	24073	S	1		1									
		智慧資安講座 Lectures in Artificial Intelligence & Information Security	34070	S	2		2									
		老人福祉科技概論 Introduction to Gerontechnology	34478	S	3		3									
		遠距醫療健康服務 Telemedicine and Telehealth Services	18916	S	3		3									
		Web基本原理與技術 Web Fundamentals	15163	S	3			3								
		離散數學 Discrete Mathematics	02933	S	3			3								
		線性代數 Linear Algebra	02766	S	3			3								
		物聯網概論 Introduction to Internet of Things	19679	S	3			3								
		網頁全端設計實務 Full Stack Web Design	34477	S	3			3								
		物聯網應用系統 IOT Application Systems	19980	S	3				3							
		臨床醫學概論 Introduction to Clinical Medicine	02898	S	3				3							

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						first semester	second semester	first semester	second semester	first semester	second semester	first semester	second semester			
系選修課程 Electives		基礎人體醫學概論 Introduction to basic human medicine	21195	S	3				3					15	15	選修外系課程至多承認9學分。 A maximum of 9 credits will be recognized for elective courses taken from external departments.
		人機介面設計與使用者經驗 Human-computer Interface Design and User Experience	30033	S	3				3							
		作業系統 Operating System	01558	S	3				3							
		物聯網安全 Internet of Things Security	35092	S	3				3							
		醫學影像系統 Medical Image System	17125	S	3					3						
		機器學習 Machine Learning	13027	S	3					3						
		醫療數據分析與機器學習 Medical Data Analysis and Machine Learning	34412	S	3					3						
		動作辨識與機器學習 Activity Recognition and Machine Learning	34476	S	3					3						
		健康照護資訊與實務應用 Health Care Information and Practical Application	36018	S	3					3						
		護理資訊系統開發 Nursing Information System Development	31639	S	3						3					
		醫療資訊使用者介面設計 Medical Information User Interface Design	33285	S	3						3					
		深度學習 Deep Learning	31358	S	3						3					
		人工智慧 Artificial Intelligence	01016	S	3								3			
		智能機器人學與應用 Introduction to Intelligent Robot and Applications	24316	S	3								3			
		高等軟體工程 Advanced Software Engineering	14764	S	3								3			
		資訊安全導論 Introduction to Information	34069	S	3		3									
		資通訊安全實務 Information and Communication Security Practices	35458	S	3			3								
		醫療資訊安全 Medical Information Security	35087	S	3			3								
		軟體工程概論 Introduction to Software Engineering	20621	S	3			3								
		資料庫安全實務 Database Security Practices	35089	S	3			3								
		巨量資料分析與應用 Big Data Analysis and	35088	S	3			3								
		網路安全 Network Security	08298	S	3				3							

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						first semester	second semester	first semester	second semester	first semester	second semester	first semester	second semester			
		區塊鏈技術與安全 Blockchain technology and	35340	S	3				3							
		系統安全 System Security	35417	S	3					3						
		弱點掃描與入侵偵測 Vulnerability Assessment and Intrusion Detection	36017	S	3					3						
		安全程式設計 Security Programming	35091	S	3					3						
		網路攻防技術 Network Attack and Defense Techniques	35152	S	3						3					
		雲端運算與安全 Cloud Computing and Security	35094	S	3						3					
		密碼學 Cryptography	05820	S	3						3					
		數位鑑識 Digital Forensics	35459	S	3						3					
		企業紫隊攻防與實務演練 Enterprise purple team offensive and defensive and practical drills	36090	S	3						3					
Holistic Education Credits A	32	Department Required Credits B		Required	72	72		Elective s Credits	Professional	15	24	Graduation credits A + B + C				128
				Others	0				External	9						

主任：

院長：

課務組：

教務長：