

Bachelor Program in Department of Artificial Intelligence (For Y111 enrolled students)

必修 Required/Elective	科目名稱 Subject	一		二		三		四		
		上	下	上	下	上	下	上	下	
必修 Required	專 微積分(1)(2) Calculus (1)(2) 計算機概論(1)(2) Introduction to Computer Science (1)(2) 離散數學 Discrete Mathematics	3	3	人工智慧 Artificial Intelligence	3	深度學習 Deep Learning	3	專題研究(3) Capstone (3)	1	
		3	3	資料結構與演算法(1) Data Structure and Algorithms (1)	3	作業系統 Operating System	3			
		3		大腦與認知科學 Brain and Cognitive Science	3	資料探勘 Data Mining	3			
	業 普通物理學 General Physics 普通物理學實驗 General Physics Laboratory 普通生物學 General Biology 普通生物學實驗 General Biology Laboratory	2		資料庫系統設計 Database System Design	3	平行程式設計 Parallel Programming Design	3			
		1		線性代數 Linear Algebra	3	專題研究(1) Capstone (1)	0			
		2		資料結構與演算法(2) Data Structure and Algorithms (2)	3	專題研究(2) Capstone (2)	1			
		1		機率與統計 Probability and Statistics	3	人工智慧講座 Artificial Intelligence Colloquium	1			
選修 Elective	學院共構課程					英語口說與報告(1) English Speaking and Reporting (1)	2	海外研讀 International Study Course	1	
						英語口說與報告(2) English Speaking and Reporting (2)	2			
	智慧醫療 Smart Healthcare			生物統計學專論 Bioinformatic Analysis	2	生物資訊學 Bioinformatics	2	量化大數據分析與繪圖 Big Data Analysis and Visualization	2	
				體學概論 Introduction to Omics	2	人工智慧在自然語言處理與應用 Artificial Intelligence in Natural Language Processing and Applications	3	生醫訊號分析 Biomedical Signal Analysis	3	
				放射診斷器材學 Diagnostic Radiology Instrumentation	3	醫學影像處理 Medical Image Processing	3	電腦視覺 Computer Vision	3	
						機器學習與其醫學應用 Machine Learning and Its Medical Applications	3	校外實習 Internship	4	
								生物資訊分析 Bioinformatic Analysis	3	
								感測科學 Sensor Science	3	
								臨床資訊工程 Clinical Informatics	3	
								智慧醫療工程 Smart Healthcare Engineering	3	
								醫學影像系統 Medical Image System	3	
								樣型識別 Pattern Recognition	3	
		智慧製造 Smart Manufacturing			網頁程式設計 Web Programming	3	決策分析 Decision Analysis	3	智慧物聯網 Artificial intelligence & Internet of Things	3
					智慧型機器人概論 Introduction to Intelligent Robotics	3	網路安全概論 Computer Network Security	3	智慧物網實體系統 Intelligent Cyber-Physical System	3
					應用統計學 Applied Statistics	3	軟體工程 Software Engineering	3	雲端系統 Cloud Systems	3
					行動裝置應用程式設計 Mobile Device Application Programming	3	智慧工廠 Smart Factory	3	校外實習 Intern	4
							人工智慧在自然語言處理與應用 Artificial Intelligence in Natural Language Processing and Applications	3	資安結構 Introduction to cybersecurity	3
									區塊鏈技術基礎與應用 Blockchain technologies: Foundation and Applications	3
									感測科學 Sensor Science	3
							臨床資訊工程 Clinical Informatics	3		
							電腦視覺 Computer Vision	3		
							量子機器學習 Quantum Machine Learning	3		
						量子計算專論 Introduction to Quantum Computing	3			
備註 Note	<p>1. 畢業學分：128 學分。 Graduation Credits: 128 credits.                      (1) 必修 63 學分。 Required Courses: 60 credits.                      (2) 選修 36 學分： Elective Courses: 36 credits.                      a. 專業選修：專業選修分為「智慧醫療」與「智慧製造」二大領域，須至少選修 30 學分，其中一領域至少修習 18 學分。 Specialized Electives: Specialized electives are divided into two major fields, 'Smart Healthcare' and 'Smart Manufacturing.' Students are required to take a minimum of 30 credits, with a minimum of 18 credits in one of the fields.                      b. 其餘學分得選修本校非通識課程(體育及全民國防教育軍事訓練選修課程不予列入)。 The remaining credits can be fulfilled by taking non-general education courses offered by the university (Physical Education and Military Training courses for National Defense Education are not included).</p> <p>(3) 通識課程：請詳見通識中心修課規定。 General Education Courses: Please refer to the regulations of the General Education Center for course requirements.                      a. 人工智慧概論 1 學分。 Introduction to Artificial Intelligence: 1 credit.                      b. 英文領域、核心、多元課程 28 學分。 English Field, Core, and Diversity Courses: 28 credits.</p> <p>2. 體育大一、大二必修 0 學分。 Physical Education Mandatory for Freshman and Sophomore Years: 0 credits.                      3. 【深耕學園】必修 0 學分，請詳見學務處深耕學園專區說明。 [Shengen Campus] is a mandatory course with 0 credits. Please refer to the Office of Academic Affairs for detailed information on the Shengen Campus program.                      4. 本校訂有英文畢業門檻，須達校訂標準方可畢業，請詳見語文中心規定。 The university has set an English graduation threshold. Graduation is contingent upon meeting the university's standards; please refer to the Language Center regulations for details.</p>									