

**Course List for International Master of Science (MS) Degree Program
in Computer Science & Information Engineering, Chang Gung University
(for 2023 calendar year admission) Apr. 10th, 2023**

長庚大學資訊工程學系碩士班必修選修科目表 (112學年度入學之外國學生適用; 112年4月10日系課委會修正通過)

	Course Title	1st semester	2nd semester
Compulsory	*Special Project (1) 專題研究(1)	1	
	*Special Project (2) 專題研究(2)		1
	*Seminar (1) 學報討論(1)	2	
	*Seminar (2) 學報討論(2)		2
	*Seminar (3) 學報討論(3)	2	
	*Seminar (4) 學報討論(4)		2
	*System Performance Analysis 系統效能分析	3	
	*Thesis 論文撰寫	0	0
Elective	English Speaking and Presentation (1) 英語口說與報告(1)	2	
	English Speaking and Presentation (2) 英語口說與報告(2)		2
	English Technical Writing (1) 科技英文寫作(1)	1	
	English Technical Writing (2) 科技英文寫作(2)		1
	Embedded Software Design 嵌入式軟體設計	3	
	*Advanced Computer Architecture 高等計算機架構		3
	Database Design 資料庫設計	3	
	*Service-Oriented Architecture (SOA) 服務導向應用系統設計	3	
	Hardware-Software Co-Design 軟硬體協同設計		3
	*Data Engineering 資料工程	3	
	Objected-Oriented Software Engineering 物件導向軟體工程		3
	*Embedded Operating System 嵌入式作業系統	3	
	Parallel and Distributed Systems 平行與分散式系統		3
	Pattern Recognition 樣型識別	3	
	Machine Learning 機器學習		3
	Advanced Computer Network 高等計算機網路	3	
	Internet of Things 物聯網		3
	Network Security and Management 網路安全與管理		3
	Cloud System 雲端系統		3
	Medical Informatics 生醫資訊概論	3	
	*Digital Signal Processing 數位訊號處理	3	
	*Wireless Network 無線網路		3
	*Personal Communications 個人通訊	3	
	*High-Speed Networks and Applications 高速網路專論	3	
	*Machine Learning and Its Medical Applications 機器學習與其醫學應用		3
	*Python Programming for Deep Learning 深度學習與Python實作		3
	*Medical Image Processing 醫學影像處理		3
	*Selected Topics on Network System 網路系統專論	3	
	*Cyber-Physical Systems 網宇實體系統		3
	*Selected Topics on Mobile Communications 行動通訊專論		3
Speech and Image Processing 語音暨影像處理		3	
Multimedia Security 多媒體安全	3		
Remarks	<p>1. Graduation credits required: 40. 畢業學分共40學分。</p> <p>2. Compulsory credits: 13 (including 2-credit Special Project, 8-credit Seminar, and 3-credit System Performance Analysis). 必修學分共13學分(不含論文)。(含專題研究2學分, 學報討論8學分及系統效能分析3學分)。</p> <p>3. Elective credits: 21. At least 15 elective credits should be taken from the above elective course list. Students are allowed to take up to 6 elective credits from the English-taught graduate-level courses of Chang Gung University subject to the approval from his/her advisor, and if the elective credits are not provided by College of Engineering, students have to further get the approval from the Chairman of our department. 選修學分共21學分, 需修習本系選修課程至少15學分。研究生經指導教授同意後得選修本校其他系所碩、博士班開設之英文授課課程, 且外系選修以6學分為上限, 如外系選修課程由工學院外提供, 則學分核給需進一步經系所主管認定。</p> <p>4. Six thesis credits will be awarded upon the completion of oral defense exam. 論文6學分將於通過學位考試並繳交通過審核論文後給予。</p> <p>5. Courses with asterisk (*) are conducted in English. Other courses are lectured primarily in Chinese language. 星號(*)標示之課程為全英文授課, 其他課程以中文授課為主。</p> <p>6. Graduation requires meeting the English proficiency threshold: The standards for passing the English proficiency test are implemented according to the "English Proficiency Requirements for Graduate Students of the College of Engineering, Chang Gung University". 須達英文畢業門檻方可畢業: 英文能力檢定通過標準依據「長庚大學工學院研究生英文能力檢測實施方案」實施。</p> <p>7. Depending on the availability, students may join the PhD program of Computer Science and Information Engineering for their required seminar courses. 若無碩士班英文授課之學報討論開課, 學生可修讀本系博士班之英文授課學報討論課程。</p>		