

**Course List for International Master of Science (MS) Degree Program
in Computer Science & Information Engineering, Chang Gung University
(for 2019 calendar year admission) Jan. 6th, 2020**

長庚大學資訊工程學系碩士班必選修科目表 (108學年度入學之外國學生適用; 109年1月6日系務會議修訂)

	Course Title	1st semester	2nd semester
R e q u i r e d	*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)	1	
	*Seminar (2) 學報討論(2)		1
	*Seminar (3) 學報討論(3)	1	
	*Seminar (4) 學報討論(4)		1
	*System Performance Analysis 系統效能分析	3	
*Thesis 論文撰寫	0	0	
E l e c t i v e	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	
	Computational Molecular Biology 計算生物學		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		
R e m a r k s	1. Graduation credit hours required: 36. 畢業學分共36學分。		
	2. Required hours: 9 (including 2-hr Special Project, 4-hr Seminar, and 3-hr System Performance Analysis). 必修學分共9學分(不含論文)。(含專題研究2學分, 學報討論4學分及系統效能分析3學分)。		
	3. Elective hours: 21. At least 15 elective hours should be taken from the above elective course list. Students are allowed to take up to 6 elective hours from the English-taught graduate-level courses of Chang Gung University subject to the approval from his/her advisor, and if the elective hours 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。		
	4. Six thesis hours will be awarded upon the completion of oral defense exam. 論文6學分將於通過口試畢業時授予。		
	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。		
	6. Students from a country (or region) where English is not an official language are required to comply an English standard as posted by the College of Engineering. 非以英文為官方語言國家或地區之外國學生, 應於畢業論文口試前滿足「長庚大學工學院碩士班研究生英文能力檢測實施方案」頒訂之英文門檻。		
	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。		