

**Course List for International Master of Science (MS) Degree Program
in Computer Science & Information Engineering, Chang Gung University**

(for 2015 calendar year admission) October 31st, 2016

長庚大學資訊工程學系碩士班必選修科目表 (104學年度入學之外國學生適用; 105年10月31日系課委會修訂)

	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 Mining 資料探勘		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	
	Molecular Biology & Genetics 分子生物與遺傳學	3		
	Pattern Recognition 樣型識別	3		
	*Introduction to Bioinformatics 生物資訊概論	3		
	Machine Learning 機器學習		3	
	Advanced Computer Network 高等計算機網路	3		
	Medical Information System 醫學資訊系統	3		
	The Internet Things 物聯網		3	
	Network Security and Management 網路安全與管理		3	
	Cloud System 雲端系統		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	
	Soft Computing 柔性計算	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：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：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: at least 21 from the above listed courses. Students are allowed to take up to 50% of these elective hours from the following English-taught graduate-level courses of College of Engineering subject to the approval from his/her advisor - 「Introduction to Biomedical Engineering」、 「Development and Regulations of Medical Device」、 「Biosensor Technology」、 「Medical MEMS」 and 「Research Methodology」。 選修學分: 21. 研究生經指導教授同意後得選修本院其他相關科/系/所碩、博士班開設之以下英語授課課程 - 「醫學工程概論(Introduction to Biomedical Engineering)」、 「醫療器材開發與驗證(Development and Regulations of Medical Device)」、 「生物感測器技術(Biosensor Technology)」、 「醫療微機電(Medical MEMS)」及 「研究方法(Research Methodology)」，以畢業學分(不含【論文】、【學報討論】、【專題研究】及【系統效能分析】)之50%為上限。				
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時，學生可修讀電機系資工領域博士班之英文授課學報討論課程。				