

長庚大學 機械工程研究所博士班 必選修科目表 (113 學年度入學學生適用)

Course List for Doctor of Philosophy (Ph.D.) Degree Program in Department of Mechanical Engineering,
Chang Gung University (for 2022Calendar Year)

領域／組 別 Area	必選修 Compulsory or Elective	科目名稱 Course Title	學分 Credits	開課年 級 Year	上學期 1st semester	下學期 2nd semester
系必修	必 C	學報討論 Seminar	4	1st	2	2
	必 C	學報討論 Seminar	4	2nd	2	2
學院共構	必 C	科技英文寫作(1) English Technical Writing (I)	1	1st	1	
	必 C	科技英文寫作(2) English Technical Writing (II)	1	1st		1
系選修	選 E	彈性力學# Theory of Elasticity	3	1st	3	
	選 E	機械冶金* Mechanical Metallurgy	3	1st	3	
	選 E	醫學影像處理 Medical Image Processing	3	1st	3	
	選 E	電極加工特論 Special Issue of Electrode Machining	3	1st	3	
	選 E	材料破壞分析與預防* Analysis and Prevention of Materials Failures	3	1st	3	
	選 E	醫療微機電 Medical MEMS	3	1st	3	
	選 E	生物感測器技術 Biosensor Technology	3	1st	3	
	選 E	電子光電構裝特論 Special Topics in Electronic/Optoelectronic Packaging	3	1st	3	
	選 E	神經網路與深度學習 (Neural Networks and Deep Learning)	3	1st	3	
	選 E	生醫訊號分析 Biomedical Signal Analysis	3	1st	3	
	選 E	生物力學 Biomechanics	3	1st		3
	選 E	固體力學特論 Introduction to Solid Mechanics	3	1st		3
	選 E	高分子流變學 Polymer Rheology	3	1st		3
	選 E	電子顯微鏡分析* Electron Microscopy Analysis	3	1st		3
	選 E	生醫材料工程 Biomaterials Engineering	3	1st		3
	選 E	醫療機械設計 Design of Medical Device	3	1st		3
	選 E	電動力學 Electrodynamics	3	1st		3
	選 E	表面電漿子原理與應用 Principle and Applications of Surface Plasmon	3	1st		3

備註 Remarks	1.畢業學分：34 學分 (1)必修 10 學分 (2)選修 18 學分，其中至少 9 學分以上為本所博士班課程（碩士班已選修本所博士班課程者，可至外所選修，補足學分要求），其餘 9 學分可在本所或本校其他所選課。 (3)論文 6 學分(通過學位考試並繳交通過審核論文後給予)。 2.須達英文畢業門檻方可畢業：依「長庚大學工學院博士班研究生英能力檢測實施方案」規定。 3.經由外籍生管道入學之碩博士外籍生，修習院內外系所英語授課專業領域課程承認為畢業學分數，以畢業學分(不含【論文】及【學報討論】)之 50%為上限，所修習之課程需經指導教授同意並經學術委員會審查通過方得承認為畢業學分。 4.其他：A.「學報討論」一、二年級為必修，合計四學分。畢業前至少須修習四個學期並通過。B.「*」表示隔年開授。 5. 必修擋修規定：需先修畢(70 分)「科技英文寫作」(1)，才可修習「科技英文寫作」(2)。 1. Graduation credits: 34 2. Compulsory credits: 10 (Four Seminar courses for the first and the second year.) 3. Graduation dissertation (6 credits) 4. Elective courses from ME (9 credits) 5. Elective courses from ME or other departments (9 credits) 6. Others: A. “*”: offered bi-annually. B. English requirement: English Proficiency Assessment for Foreign Students. 7. Both “English Technical Writing (I)” and “English Technical Writing (II)” are required courses for Ph.D. students. One must complete “English Technical Writing (I)” first with a score no less than 70, before being allowed to take “English Technical Writing (II)”. Remarks: For international students, English taught courses (excl. Seminar and graduation thesis) in the University can be accepted with conditions of a limitation of 9 credits and approval from advisor.
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