

114 學年度化工系研究所專業選修科目課程規劃表

List of Graduate Degree Department Elective Courses, Department of Chemical Engineering, Academic
Year 114

中英文科目名稱 Course Title	學分 數 Credits	碩士班 Master				博士班 Doctor				備註 Notes (選課須 知等注 意事項)
		第一學年 1 st Year		第二學年 2 nd Year		第一學年 1 st Year		第二學年 2 nd Year		
		上 1st semester	下 2 nd semester	上 1st semester	下 2 nd semester	上 1st semester	下 2 nd semester	上 1st semester	下 2 nd semester	
控制系統設計 Control System Design	3	✓		✓		✓		✓		實際開課 情形依當 學期公告 為準，以上 列表僅供 參考。The actual offering of courses is subject to the official announcem ent of each semester, and the above list is for reference only.
化工程序模擬 Chemical Process Simulation	3	✓		✓		✓		✓		
高等環境工程 Advanced Environmental Engineering	3	✓		✓		✓		✓		
高分子加工原理 Principles of Polymer Processing	3	✓		✓		✓		✓		
程序強化 Process Intensification	3	✓		✓		✓		✓		
電子材料 Electronic Materials	3	✓		✓		✓		✓		
電化學反應工程 Electrochemical Reaction Engineering	3	✓		✓		✓		✓		
核磁共振原理與應用 Theory and Applications of Nuclear Magnetic	3	✓		✓		✓		✓		
組織再生與醫用材料 Tissue Regeneration and Biomedical Materials	3	✓		✓		✓		✓		
材料光學性質 Optical Properties of Materials	3	✓		✓		✓		✓		
文獻選讀(一)(二) Reading Seminar (I) (II)	3	✓	✓	✓	✓	✓	✓	✓	✓	
高等程序控制 Advanced Process Control	3	✓		✓		✓		✓		
高等高分子化學 Advanced Polymer Chemistry	3		✓		✓		✓		✓	
超臨界流體技術 Supercritical Fluid Technology	3		✓		✓		✓		✓	
實驗設計 Experimental Design	3		✓		✓		✓		✓	
真空薄膜工程 Vacuum and Thin Film Technology	3		✓		✓		✓		✓	
化學氣相沈積與應用 Chemical Vapor Deposition and Its Applications	3		✓		✓		✓		✓	
應用微生物學 Applied Microbiology	3		✓		✓		✓		✓	
基因重組技術 Recombinant DNA Technology	3		✓		✓		✓		✓	

X 光及中子散射 Methods of X-Ray and Neutron Scattering	3		√		√		√		√
數值方法與應用 Applied Numerical Methods	3	√		√		√		√	
表面物理化學 Physical Chemistry of Surfaces	3	√		√		√		√	
X 光繞射原理與應用 Theory and Application of X-Ray Diffraction	3	√		√		√		√	
多變數控制 Multivariable Control	3	√		√		√		√	
電子材料 Electronic Materials	3	√		√		√		√	
高分子物性 Physical Properties of Polymers	3	√		√		√		√	
生物分子工程 Biomolecular Engineering	3	√		√		√		√	
不勻相觸媒 Heterogeneous Catalysis	3	√		√		√		√	
應用電化學 Applied Electrochemistry	3	√		√		√		√	
科技論文寫作 Scientific Writing in Chemical Technology	3	√		√		√		√	
高等應用熱力學 Advanced Applied Thermodynamics	3		√		√		√		√
高等環境科學 Advanced Environmental Science	3		√		√		√		√
酵素工程 Enzyme Engineering	3		√		√		√		√
高等化工數學 Advanced Chemical Engineering Mathematics	3		√		√		√		√
高等固態化學 Advanced Solid State Chemistry	3		√		√		√		√
奈米材料之製備結構應用 Preparation, Structures and Applications of Nanomaterials	3		√		√		√		√
合 計 Total	108								