

課程資訊	
課程名稱	高分子表面分析 Polymer Surface Characterization
開課學期	114-2
授課對象	工學院 高分子科學與工程學研究所
授課教師	賴育英
課號	PSE7043
課程識別碼	549EM2090
班次	
學分	3.0
全/半年	半年
必/選修	選修
上課時間	星期三2,3,4(9:10~12:10)
上課地點	博雅310
備註	本課程以英語授課。 總人數上限：24人
課程簡介影片	
核心能力關聯	核心能力與課程規劃關聯圖
課程大綱	
為確保您的權利,請尊重智慧財產權及不得非法影印	
課程概述	The course covers various topics related to polymer surface characterization, including thin film preparation and techniques such as wettability analysis, X-ray photoelectron spectroscopy, X-ray absorption spectroscopy, X-ray scattering, atomic force microscopy, scanning electron microscopy, transmission electron microscopy, and scanning tunneling microscopy.
課程目標	The course objectives are as follows: 1. Introduce concepts of analysis and statistics. 2. Provide an understanding of thin film preparation, intermolecular interactions, and wettability. 3. Explore X-ray techniques, including X-ray photoelectron spectroscopy, X-ray absorption spectroscopy, and X-ray scattering methods. 4. Introduce microscopy techniques, such as atomic force microscopy, scanning electron microscopy, transmission electron microscopy, and scanning tunneling microscopy.
課程要求	Knowledge of physical chemistry and polymer chemistry is required.
預期每週課前或/與課後學習時數	0.5 hour/1.5 hour
Office Hours	

指定閱讀	The required readings for the course consist of handouts provided during the lectures.		
參考書目	Polymer Surface Characterization Ed. by Sabbatini, Luigia, 2014 https://www.degruyter.com/document/doi/10.1515/9783110288117/html Surface Analysis–The Principal Techniques, 2nd Edition Ed. by John C. Vickerman, Ian S. Gilmore, 2009 https://onlinelibrary.wiley.com/doi/book/10.1002/9780470721582 Polymer Surfaces and Interfaces: Characterization, Modification and Applications Ed. by Manfred Stamm, 2008 https://link.springer.com/book/10.1007/978-3-540-73865-7 Microstructural Characterization of Materials, 2nd Edition Ed. by David Brandon, Wayne D. Kaplan, 2008 https://onlinelibrary.wiley.com/doi/book/10.1002/9780470727133		
評量方式 (僅供參考)	1. 本校尚無訂定 A+ 比例上限。 2. 本校採用等第制評定成績，學生成績評量辦法中的百分制分數區間與單科成績對照表僅供參考，授課教師可依等第定義調整分數區間。詳見學習評量專區 (連結)。		
課程進度			
週次	日期	單元主題	
無資料			