朝陽科技大學 094學年度第1學期教學大綱
Computer Integrated Manufactruing 電腦整合製造

當期課號	1573	Course Number	1573
授課教師	林均燁	Instructor	LIN,JIUN YEH
中文課名	電腦整合製造	Course Name	Computer Integrated Manufactruing
開課單位	工業工程與管理系(四日)三A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	近年來，由於網路資訊系統之快速發展，已經將製造工程推展至電腦全面監控之全自動化生產機構。雖然所應用之關鍵技術因產品別而異，而其中之共同點不外乎相關電腦輔助工具之大量應用、新型材料的快速開發、超高精密新型製程的突破與發明、以及結合人工智慧和系統式演算法之高效能製造系統。這些在二十世紀末所發展出來的去人化製造科技、或是無人化製造科技如今已經儼然成爲新世紀之中工業競爭與發展之必備工具。	Objectives	Recently, based on the fast evolution of networked information system, manufacturing engineering has already been improved to a fully monitored and controlled automatic production mechanism. Although the key application techniques might be different according to product categories, many of the issues; such as the broad usage of computer-aided tools, the rapid development of new materials, the invention of ultra-precision manufacturing processes, and the application of high-synergy production systems which combined the theories of artificial intelligence and systematic programming; are in fact common to most industries. All of the manpower-reduction manufacturing techniques developed in the 20th century have become the necessary tools for industries to compete and grow in the new century.
教材	1. 電腦整合製造，黃仁聰、林棋瑋編譯，高立圖書，93年。	Teaching Materials	
成績評量方式	平時成績15%、期中考25%、期末考30%、學期報告30%	Grading	Overall presentation 15%, Midterm25%, Final exam 30%, Term project 30%
教師網頁	http://163.17.12.217/~jlin/		
教學內容	學期中有三分之一課程由校外專業講師負責授課. 教學內容包括研發程序簡介, 電腦輔助設計、分析與製造簡介, 逆向工程與快速成型, 檢測原理與檢測技術, 製造與組裝設計方法(DFMA)與其他DFX方法, 豐田生產系統與及時生產, 自動化工程整體介紹, 自動化傳動元件實務, 感測器與控制器實務, 自動化模組的建構實務.	Syllabus	Topics will include introduction of R&D process, CAD/CAE/CAM, reverse engineering and rapid prototyping, inspection technologies and principles, DFMA and other DFX issues, TPS and JIT, overall introduction of automation engineering, practices of automatic transmission elements, practices of sensors and controllers, workshops of building-up automation modules.

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