朝陽科技大學 098學年度第2學期教學大綱
Calculus(II) 微積分(二)

當期課號	1640	Course Number	1640
授課教師	許世宗	Instructor	HSU,SHIH TSUNG
中文課名	微積分(二)	Course Name	Calculus(II)
開課單位	營建工程系(四日)一A	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	此課程爲微積分(一)的延伸，目的在教導大一學生更精進的微積分技巧，爲修習工程數學與各種營建專業科目前的應修課程。課程重點涵蓋理論推導、基本題型、思考題型和工程實務應用題目之演算。主要授課主題包括：積分的基本形式、超越函數的微積分、積分的應用、積分的技巧（含羅畢達法則）、偏微分的計算與應用、級數的計算與應用。本課程透過推導、演算、問題解析和課後作業來增進學生思維、計算和解析之能力，進而使學生具有工程計算、分析與設計之能力。	Objectives	This course is designed to instruct freshman students with advanced calculating skill and understanding on calculus, and prepare for learning engineering mathematic, structure analysis and mechanics. This course contains theoretical reasoning, problem calculation, and engineering application. Main topics included are (1) logarithmic, exponential and other transcendental functions, (2) applications of integration, (3) integration techniques, L'Hopital's rule, and improper integrals, and (4) infinite series, functions of several variables, and multiple integrations.
教材	Larson, Hostetler and Edwards (2009) " Calculus ", 9th Edition.	Teaching Materials	Larson, Hostetler and Edwards (2009) " Calculus ", 9th Edition.
成績評量方式	1.作業（15%） 2.平時考二次（15%*2=30%） 3.期中考（25%）4.期末考（30%）	Grading	1. home work (15%) 2. test (15%*2=30%) 3. mid term (25%) 4. final exam (30%)
教師網頁	http://www.cyut.edu.tw/~sthsu		
教學內容	1.對數，指數函數與其他超越函數之微積分 2.積分之應用 3.積分技巧，羅必達法則與瑕積分 4.無窮級數 5.多變數函數 6.重積分	Syllabus	The course includes: logarithmic,exponential and other transcendental functions,applications of integration,integration techniques,L'Hopital's rule,and improper integrals,infinite series,functions of several variables, and multiple integration

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