朝陽科技大學 095學年度第1學期教學大綱
Calculus 微積分

當期課號	3844	**Course Number**	3844
授課教師	廖俊鑑	**Instructor**	LIAW,JIUN JIAN
中文課名	微積分	**Course Name**	Calculus
開課單位	資訊管理系(四進)一A	**Department**	
修習別	必修	**Required/Elective**	Required
學分數	3	**Credits**	3
課程目標	本課程之目的在使學生能瞭解微積分的基本原理和應用的技術，課程內容包含1.實數、函數與其圖形 2.導函數與微分 3.微分的應用 4.指數函數與對數函數的微分 5.反導函數和積分的定義 6.三角函數的微分&積分 7.積分技術	**Objectives**	The main purpose of this course is to let students understand the fundamental principles of the differential integral calculus and its basic techniques of applications. The content involves real numbers, functions and graphs, the derivative and its applications, derivatives of exponential and logarithmic functions, derivative the trigonometric functions, and techniques of integration.
教材	1. 教材課本: Calculus Concepts & Contexts/ 3E / James Stewart 2. 參考書籍: Calculus and its Applications / 3ed / Daniel D.	**Teaching Materials**	1.Calculus Concepts & Contexts/ 3E / James Stewart 2.Calculus and its Applications / 3ed / Daniel D.
成績評量方式	1.平時成績:含隨堂測驗、出缺勤、學習態度 40％ 2.期中成績：30 ％ . 3.期末成績：30 ％	**Grading**	1.Ordinary grading:quiz absence from class learning attitude 40% 2.Mid-Examination 30% 3.Terminal-Examination 30%
教師網頁	http://www.cyut.edu.tw/~jjliaw		
教學內容	1.復習有關學習微積分的基礎,實數 函數 代數運算.2.極限 單邊極限 連續性 無窮極限.3.微分 微分的性質 邊際分析.4.微分的應用:撿驗臨界點 增減函數 極值 反曲點繪圖5.指數函數與對數函數的微分 6.反微分7.積分基本概念 積分技術.	**Syllabus**	1.Review：Real numbers and Algebra operations，Functions2.Limits，Continuity，One－side limits，infinite limits，limits at infinity3.Derivatives，The rules for differentiation，Marginal analysis，Differentials4.Applications of the derivative：increasing and decreasing、critical numbers、the first derivative test、extrema、the second derivative test、inflection points、graphs and elasticity of demand5.Differentiation of exponential logarithmic functions6.Anti-defferentiate.7.Thefundamental conceptsof integral and basic techniques of integral