

朝陽科技大學 099學年度第1學期教學大綱
Calculus(I) 微積分(一)

當期課號	2493	Course Number	2493
授課教師	楊志弘	Instructor	YANG, CHIH HUNG
中文課名	微積分(一)	Course Name	Calculus(I)
開課單位	資訊工程系(四日)一A	Department	
修習別	必修	Required/Elective	Required
學分數	3	Credits	3
課程目標	本課程主要介紹微分及積分的定義、技巧及應用，其主要涵蓋的範圍有： 1. 極限與連續性 2. 微分 3. 微分的應用 4. 積分 5. 定積分的應用 6. 積分的技巧 7. 一次微分方程式 8. 無窮級數	Objectives	This course gives an introduction to the definitions, techniques and applications of differentiation and integration. Topics to be covered are: 1. Limits and continuity 2. Differentiation 3. Applications of differentiation 4. Integration 5. Applications of the definite integral 6. Integration techniques 7. First-order differential equations 8. Infinite series
教材	Daniel D.Benice 「Calculus and Its Applications」	Teaching Materials	Daniel D.Benice 「Calculus and Its Applications」
成績評量方式	01.期中考 50.0% 02.期末考 50.0% 03.態度勤惰10.0% 總共110分	Grading	01.midterm exam 50.0% 02.final exam 50.0% 03.presence 10.0% total:110 points.
教師網頁	-		
教學內容	01/課程介紹;函數與函數圖形 02/指數與根號;直角坐標與距離公式 03/函數轉換 04/極限 05/連續函數 06/導數及計算 07/導函數的乘除法則; 08/高階導函數 09/期中考 10/鍊鎖率 11/隱微分 12/反導函數 13/定積分 14/微積分基本定理 15/代入積分法 16/分部積分法 17/積分技巧練習 18/期末考試	Syllabus	01/A Precalculus Review:Function and Graphs 02/Exponents and Radicals[The Cartesian Plane and the Distance Formula] 03/Functions 04/Limits 05/Continuity 06/Some Rules for Differentiation 07/The Product and Quotient rules 08/Higher order derivatives 09/A midterm examination 10/The Chain Rules 11/Implicit differentiation 12/Antiderivatives 13/Indefinite Integrals 14/The General Power Rule 15/Integration by Substitution 16/Integration by Parts and Present Value 17/Techniques of Integration 18/A final examination

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