

96 學年下學期微積分甲統一教學一組進度表

下學期：多變數微積分

單元	週次	課次	授課內容
Chapter 9 & Section 11.10	一	2/20(三)	9.1 Slope Fields and Separable Differential Equations 9.2 First-Order Linear Differential Equations
		2/22(五)	9.3 Euler's Method 9.4 Graphical Solutions of Autonomous Differential Equations
	二	2/27(三)	9.5 Applications of First-Order Differential Equations 11.10 Applications of Power Series, Example 3 & 4
		2/29(五)	★2/29 下午停課。(為佈置 3/1. 3/2 碩士班招生的考場)
Chapter 10	三	3/5(三)	10.5 Polar Coordinates 10.6 Graphing in Polar Coordinates
Chapter 12 & Section 13.1		3/7(五)	10.7 Areas and Lengths in Polar Coordinates 12.4 The Cross Product 12.5 Lines and Planes in Space
	四	3/12(三)	12.6 Cylinders and Quadric Surfaces 13.1 Vector Functions
		3/14(五)	14.1 Functions of Several Variables 14.2 Limits and Continuity in Higher Dimensions
	Chapter 14	五	3/19(三)
3/21(五)			14.5 Directional Derivatives and Gradient Vectors
六		3/26(三)	14.6 Tangent Planes and Differentials 14.7 Extreme Values and Saddle Points
		3/28(五)	14.8 Lagrange Multipliers
七		4/2(三)	14.9 Partial Derivatives with Constrained Variables 14.10 Taylor's Formula for Two Variables
		4/4(五)	★4/4 民族掃墓節(放假一天)
八		4/9(三)	15.1 Double Integrals
		4/11(五)	複習 Chapter 14
Chapter 15 & Section 13.3	九	4/16(三)	4/16 (三) 期中考 【範圍:9.1~9.5, 11.10 Ex3&4, 10.5~10.7, 12.4~12.6, 13.1, 第14章】
		4/18(五)	15.2 Areas, Moments, and Centers of Mass 15.3 Double Integrals in Polar Form
	十	4/23(三)	15.4 Triple Integrals in Rectangular Coordinates 15.5 Masses and Moments in Three Dimensions
		4/25(五)	15.6 Triple Integrals in Cylindrical and Spherical Coordinates
	十一	4/30(三)	15.7 Substitutions in Multiple Integrals
		5/2(五)	複習 Chapter 15

Chapter 16	十二		13.3 Arc Length and the Unit Tangent Vector T
		5/7(三)	16.1 Line Integrals
	十二		16.2 Vector Fields, Work, Circulation, and Flux
		5/9(五)	16.3 Path Independence, Potential Functions, and Conservative Fields
	十三	5/14(三)	16.4 Green's Theorem in the Plane
	十三	5/16(五)	16.5 Surface Area and Surface Integrals
	十四	5/21(三)	16.6 Parametrized Surfaces
	十四	5/23(五)	16.7 Stokes' Theorem
	十五	5/28(三)	16.8 The Divergence Theorem and a Unified Theory
	十五	5/30(五)	複習 Chapter 16
Sections 13.4~13.6	十六	6/4(三)	13.4 Curvature and the Unit Normal Vector N
			13.5 Torsion and Unit Binormal Vector B
	十七	6/6(五)	Preparation for Kepler's laws (p935-937, 10.8 Conic Sections in Polar Coordinates)
	十七	6/11(三)	13.6 Planetary Motion and Satellites
	十七	6/13(五)	總複習
	十八	6/18(三)	期末考周
	十八	6/20(五)	【範圍：Sections 13.3~13.6, Chapters 15 & 16】