MATH 241—Calculus III Syllabus
University of South Carolina

Text: Calculus, Early Transcendentals, by Anton, Bivens, and Davis, 8th Edition.

Lecture	Sections	Description
1	12.1, 12.2	Rectangular Coordinates in 3-Space; Vectors
2	12.3	Dot Product; Projections
3	12.4	Cross Product
4	12.5	Parametric Equations of Lines
5	12.6	Planes in 3-Space
6	13.1, 13.2	Calculus of Vector Valued Functions
7	13.3	Change of Parameter; Arc Length
8	13.4	Unit Tangent, Normal and Binormal Vectors
9	13.5	Curvature
10	13.6	Motion Along a Curve
11	Review	
12	Exam 1	
13	14.1	Functions of Two or More Variables
14	14.2	Limits and Continuity
15	14.3	Partial Derivatives
16	14.4	Differentiability, Differentials, and Local Linearity
17	14.5	The Chain Rule
18	14.6	Directional Derivatives and Gradients
19	14.7	Tangent Planes and Normal Vectors
20	14.8, 14.9	Maxima and Minima of Functions of Two Variables; Lagrange Multipliers
21	14.9	Lagrange Multipliers
22	Review	
23	Exam 2	
24	15.1	Double Integrals
25	15.1	Double Integrals
26	15.2	Double Integrals over Nonrectangular Regions
27	15.3	Double Integrals in Polar Coordinates
28	15.4	Parametric Surfaces; Surface Area
29	15.5	Triple Integrals
30	15.5	Triple Integrals
31	15.7	Triple Integrals in Cylindrical and Spherical Coordinates
32	15.8	Change of Variables
33	Review	
34	Exam 3	
35	16.1	Vector Fields
36	16.2	Line Integrals
37	16.2, 16.3	Line Integrals; Independence of Path
38	16.3	Independence of Path
39	16.4	Green's Theorem
40	16.4	Green's Theorem
41	Review	
42	Review	