DEPARTMENT OF MATHEMATICS
SYLLABUS

Course # & Name: MAT 21C: Partial Derivatives and Series

Recommended Text(s) & Price: Thomas' Calculus: Early Transcendentals by Weir/Hass/Giordano ($142.00)

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UPC Approval Date: Spring 2005

Lecture(s)	Sections	Comments/Topics
1	11.1	Sequences
1	11.2	Series
1	11.3	Integral Test
1	11.4	Comparison Test
1.5	11.5	Ratio and Root Tests
1.5	11.6	Alternating series
1	11.7	Power Series
1	11.8	Taylor Series
1	11.9	Convergence of Taylor Series
0.5	12.1	3D coordinates
0.5	12.2	Vectors
1	12.3	Dot products
1	12.4	Cross products
1	12.5	Lines and Planes in space
1	13.1	Vector Functions
1	13.2	Projectile motion 1
1	13.3	Arc length and the unit tangent vector 1
1	13.4	Curvature and the unit normal vector
1	14.1	Functions and Several Variables
1	14.2	1 Limits and Continuity
1	14.3	Partial Derivatives
1	14.4	Chain Rule
1	14.5	Directional derivatives and gradients
1	14.6	Tangent planes and differentials
1	14.7	Second derivative test. Saddle points
1	14.8	Lagrange multipliers

Additional Notes:

Total number of lectures = 26, allowing 4 for extra time and exams.

If time runs out, consider omitting 11.9, 13.2, 13.3, or 13.4.

If time allows, add one lecture on 11.10 (Applications of Power Series).