

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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Version
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Lecture(s)	Sections	Comments/Topics
1	11.1	Sequences
1.5	11.2	Series
1	11.3	Integral Test
1.5	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
1	11.10	Applications of Power Series
1	12.1	3D Coordinates
1	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	13.3	Arc Length and the Unit Tangent Vector
1	13.4	Curvature and the Unit Normal Vector
1	14.1	Functions of Several Variables
1	14.2	Limits and Continuity
1	14.3	Partial Derivatives
1	14.4	Chain Rule
1.5	14.5	Directional Derivatives and Gradients
1	14.6	Tangent Planes and Differentials
1.5	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 11.10.