

## MATH 2630      Calculus III

TEXT: University Calculus, Hass, Weir, Thomas, 1st ed, ISBN: 0-321-40931-0

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Section	Number of days
10.3, 10.4, & 10.5 Review	1
10.6 Cylinders and Quadric Surfaces	2
11.1 Vectors Functions and their Derivatives	2
11.2 Integrals of Vector Functions	2
11.3 Arc Length in Space	2
11.4 Curvature of a Curve	1
11.5 Tangential and Normal Components of Acceleration	2
11.6 Velocity and Acceleration in Polar Coordinates	1
12.1 Functions and Several Variables	1
12.2 Limits and Continuity in Higher Dimensions	1
12.3 Partial Derivatives	2
12.4 The Chain Rule	2
12.5 Directional Derivatives and Gradient Vectors	1
12.6 Tangent Planes and Differentiaals	2
12.7 Extreme Values and Saddle Points	3
12.8 Lagrange Multipliers	2
13.1 Double and Interated Integrals over Rectangles	1
13.2 Double Integrals over General Regions	1
13.3 Area by Double Integration	2
13.4 Double Integrals in Polar Form	2
13.5 Triple Integrals in Rectangular Coordinates	2
13.7 Triple Integrals in Cylindrical and Spherical Coordinates	2
13.8 Substitution in Multiple Integrals	2
14.1 Line Integrals	2
14.2 Vector Fields, Work, Circulation, and Flux	2
14.3 Path Independence, Potential Functions, and Conservation Fields	1
14.4 Green's Theorem in the Plane	2
14.5 Surfaces and Area	2
14.6 Surface Integrals and Flux	2
14.7 Stokes' Theorem	2
14.8 The Divergence Theorem and a Unified Theory	2
Total .....	54

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