MTH 2001 – Calculus 3

Study Topics

Textbook: Multivariable Calculus, 8th ed., by James Stewart

12.1: 3D Coordinates
12.2: Vectors
12.3: Dot Product
12.4: Cross Product
12.5: Lines and Planes
12.6: Quadric Surfaces
13.1: Vector Functions
13.2: Vector Function Derivatives & Integrals
13.3: Arclength & Curvature
13.4: Velocity & Acceleration

Test 1

14.1: Functions of Several Variables
14.2: Limits and Continuity
14.3: Partial Derivatives
14.4: Tangent Planes
14.5: Chain Rule
14.6: Directional Derivative & Gradient
14.7: Maximums & Minimums
14.8: Lagrange Multipliers

Test 2

15.1A: Rectangular Double Integrals
15.1B: Iterated Integrals
15.2: General Double Integrals
15.4: Double Integral Applications
15.5: Surface Area
15.3: Polar Double Integrals
15.6: Triple Integrals
15.7: Cylindrical Triple Integrals
15.8: Spherical Triple Integrals
15.9: Change of Variables

Test 3

16.1: Vector Fields
16.2: Line Integrals
16.3: Fundamental Theorem of Line Integrals
16.4: Green's Theorem
16.5: Curl and Divergence
16.6: Parametric Surfaces
16.7: Surface Integrals
16.8: Stokes' Theorem
16.9: Divergence Theorem

FINAL EXAM