Catalog Description:
Multiple integrals, line integrals, vector fields, second order ordinary differential equations.

Prerequisite:
Math 1172, 1544, or 154.

Exclusions:
Not open to students with credit for 1152, 2153, or for any higher numbered math class, or for any quarter-system math class numbered 254 or higher.

Text:

Topics List:
13.6 (Review of) Directional Derivatives and the Gradient Vector
13.8 Maximum and Minimum Values
13.9 Lagrange Multipliers
14.1 Double Integrals over Rectangular Regions
14.2 Double Integrals over General Regions
14.3 Double Integrals in Polar Coordinates

Midterm 1
14.4 Triple Integrals
14.5 Triple Integrals in Cylindrical & Spherical Coordinates
14.7 Change of Variables in Multiple Integrals
15.1 Vector Fields
15.2 Line Integrals
15.3 Conservative Vector Fields

Midterm 2
16.1 Basic Ideas of Second Order ODE’s
Appendix C Complex Arithmetic
16.2 Linear Homogeneous Equations
16.3 Linear Homogeneous Equations
16.4 Applications; Complex Forcing Functions

Final