



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:

Calculus for Scientists and Engineers: Early Transcendentals, 2nd OSU custom edition, by Briggs, Cochran, Gillett, published by Pearson, ISBN: 9781269753449

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