MATH324

Suggested Syllabus

**Course description and prerequisite information**: see UW General Catalog

**Text**: *Calculus: Early Transcendentals*, Eighth Edition, by James Stewart

Unless otherwise indicated, allocate one day of lecture to each topic. This schedule comprises 24 days of lecture plus two midterms, leaving 2-4 days for review depending on quarter and placement of university holidays.

- 15.1 Review of Iterated Integrals
- 15.2 Double Integrals over General Regions
- 15.3 Double Integrals in Polar Coordinates
- 15.4 Applications of Double Integrals
- 15.5 Surface Area
- 15.6 Triple Integrals
- 15.7 Triple Integrals in Cylindrical Coordinates
- 15.8 Triple Integrals in Spherical Coordinates
- 15.9 Change of Variables in Multiple Integrals
- Midterm Exam I (Sections 15.1-15.9)
- 14.5 The Chain Rule
- 14.6 Directional Derivatives and the Gradient Vector
- 16.1 Vector Fields
- 16.2 Line Integrals
- 16.3 The Fundamental Theorem for Line Integrals
- 16.4 Green's Theorem (2 lectures)
- 16.5 Curl and Divergence
- Midterm Exam II (Sections 14.5, 14.6, 16.1-16.5)
- 16.6 Parametric Surfaces and Their Areas (2 lectures)
- 16.7 Surface Integrals
- 16.8 Stokes' Theorem (2 lectures)
- 16.9 The Divergence Theorem (2 lectures)
- Cumulative Final Exam