

Tentative Week by Week Schedule

Week 1 (Jan 10 - 14)

- Section 10. 1: Three Dimensional Coordinate System, Distance Formula, Equation of a Sphere
- Section 10.2: Vectors, Properties, Norm, Unit Vectors
- Section 10.3: Dot Product, Properties, Geometric definition of the Dot Product

Week 2 (Jan 17 - 21)

- Section 10.3: Dot Product (Continued)
- Section 10.4: Cross Product

Week 3(Jan 24 - 28)

- Section 10.5: Equation of Lines and Planes
- Section 10.6: Cylinders, Traces, and Quadric Surfaces
- Section 10.7: Vector Functions and Space Curves

Week 4(Jan 31 - 04)

- Section 10.8: Arc length and Curvatures
- Exam I review
- Exam I (In-Class)

Week 5(Feb 07 - 11)

- Section 10.9: Applications: Motion in space
- Section 11.1: Functions of several variables: domain, range ; level curves and level surfaces
- Section 11.2: Limits and Continuity

Week 6(Feb 14 - 18)

- Section 11.3: Partial Derivatives
- Section 11.4: Tangent planes and linear approximation
- Section 11.5: Chain Rule

Week 7(Feb 21 - 25)

- Section 11.6: Directional Derivative and the Gradient Vector
- Section 11.7: Maximum and Minimum values
- Section 11.8: Lagrange Multipliers

Week 8(Feb 28 - 04)

- Exam II Review
- Exam II

Tentative Week by Week Schedule

Week 9(Mar 14 - 18)

- Section 12.1: Double integrals– Reimann sums, iterated integrals, Fubini's Theorem
- Section 12.2: Double integrals over general regions
- Section 12.3: Double integrals in Polar coordinates

Week 10 (Mar 21 - 25)

- Section 12.3: Double integrals in Polar coordinates (continued)
- Section 12.5: Triple Integrals
- Section 12.6: Triple integrals in Cylindrical coordinates

Week 11 (Mar 28 - 01)

- Section 12.7: Triple integrals in Spherical coordinates
- Section 12.8: Jacobian
- Exam III review

Week 12 (Apr 04 - 08)

- Exam III (In-class)
- Section 13.1: Vector Fields
- Section 13.2: Line Integrals

Week 13 (Apr 11 - 15)

- Section 13.3: Fundamental theorem for Line Integrals
- Section 13.4: Green's Theorem

Week 14 (Apr 18 - 22)

- Section 13.5: Curl and Divergence
- Section 13.6: Parametric surfaces and their areas
- Section 13.7: Surface Integrals

Week 15 (Apr 25 - 29)

- Section 13.8: Stokes' Theorem
- Section 13.9: The Divergence Theorem
- Final Review