

Schedule

A week-by-week breakdown of the material.

Week 1 (01/11-1/15)

Day 1 Introduction

Day 2 Sequences (11.1). Limit of sequence. Limit Laws¹

Day 3 Sequences (11.1). Limit of sequence. Limit Laws (cont)²

Day 4 Sequences (cont, 11.1). Bounded Sequences³

Week 2 (01/18-01/22)

Day 1 Infinite Series (11.2). Introduction⁴

Day 2 Infinite Series (11.2). Geometric Series. Divergence Test⁵

Day 3 Positive Terms series (11.3)⁶

Day 4 Positive Terms series (11.3), comparison and limit comparison tests⁷

Week 3 (01/25-01/29)

Day 1 Absolute vs Conditional Convergence (11.4)⁸

Day 2 Absolute vs Conditional Convergence (11.4)⁹

Day 3 Ratio and Root tests (11.5)¹⁰

Day 4 Series tests review.

Week 4 (02/01-02/05)

Day 1 Power Series (11.6)¹¹

Day 2 Power Series (11.6), cont¹²

Day 3 Power Series (11.6), cont¹³

¹[notes/sequences.html](#)

²[notes/sequences.html](#)

³[notes/sequences_bounded.html](#)

⁴[notes/series_intro.html](#)

⁵[notes/series_intro.html](#)

⁶[notes/series_positive.html](#)

⁷[notes/series_positive.html](#)

⁸[notes/series_conditional.html](#)

⁹[notes/series_conditional.html](#)

¹⁰[notes/series_root.html](#)

¹¹[notes/series_power.html](#)

¹²[notes/series_power.html](#)

¹³[notes/series_power.html](#)

Day 4 Taylor Series (11.7)¹⁴

Week 5 (02/08-02/12)

Day 1 Taylor Series (11.7) cont¹⁵

Day 2 Vectors in the Plane (13.1)¹⁶

Day 3 Sick day

Day 4 Sick day

Week 6 (02/15-02/19)

Day 1 Review

Day 2 **Midterm 1** (study guide¹⁷)

Day 3 Vectors in the Plane (13.1, cont)¹⁸

Day 4 Vectors in the Space (13.2). Equations for lines in space.¹⁹

Week 7 (02/22-02/26)

Day 1 Sick day

Day 2 Dot product and angles (13.3).²⁰

Day 3 Dot product and angles (cont, 13.3). Projections.²¹

Day 4 Cross product (13.4).²²

Week 8 (03/07-03/11)

Day 1 Equations for planes (13.5).

Day 2 Polar, Cylindrical and Spherical Coordinates (12.3, 13.7).

Day 3 Vector-valued functions (14.1).

Day 4 Limits, derivatives, integrals for vector-valued functions (14.2). Derivative as tangent vector.

¹⁴[notes/series_taylor.html](#)

¹⁵[notes/series_taylor.html](#)

¹⁶[notes/vectors.html](#)

¹⁷[notes/midterm1_study_guide.html](#)

¹⁸[notes/vectors.html](#)

¹⁹[notes/vectors_space.html](#)

²⁰[notes/dot_product.html](#)

²¹[notes/dot_product.html](#)

²²[notes/cross_product.html](#)

Week 9 (03/14-03/18)

Day 1 Arc Length (14.3).

Day 2 Curvature (14.4). Normal vectors.

Day 3 Functions of several variables (15.1). Level curves.

Day 4 **Midterm 2**

Week 10 (03/21-03/25)

Day 1 Limits and Continuity in several variables (15.2).

Day 2 Partial Derivatives (15.3).

Day 3 Differentiability (15.4). Linear Approximation.

Day 4 Gradient, Directional derivatives (15.5).

Week 11 (03/28-04/01)

Day 1 Chain rule (15.6).

Day 2 Optimization (15.7).

Day 3 Lagrange Multipliers (15.8).

Day 4 Integration in two variables (16.1).

Week 12 (04/04-04/08)

Day 1 Integration over more general regions (16.2).

Day 2 Integrals in 3 dimensions (16.3).

Day 3 Integrals in Polar, Cylindrical, Spherical coordinates (16.4).

Day 4 Change of variables (16.6).

Week 13 (04/11-04/15)

Day 1 Change of variables (cont, 16.6).

Day 2 Catchup

Day 3 Catchup

Day 4 Catchup