Schedule

A week-by-week breakdown of the material.

Week 1 (01/11-1/15)

Day 1 Introduction
Day 2 Complex Numbers, algebra[1]
Day 3 Geometry of the Complex Plane[2]

Week 2 (01/18-01/22)

Day 1 Sequences and Series in the Complex Plane[3]
Day 2 Topology of the Complex Plane[4]
Day 3 Continuous functions, uniform convergence

Week 3 (01/25-01/29)

Day 1 Analytic Polynomials
Day 2 Differentiable Functions
Day 3 Power Series

Week 4 (02/01-02/05)

Day 1 Differentiability of Power Series
Day 2 Cauchy-Riemann Equations, Analytic functions
Day 3 Extensions of standard functions

Week 5 (02/08-02/12)

Day 1 Line Integrals
Day 2 Line Integrals, cont
Day 3 Line Integrals and antiderivatives

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[1] notes/complex_numbers.html
[2] notes/complex_numbers.html
[3] notes/complex_series.html
[4] notes/complex_topology.html

Week 6 (02/15-02/19)

Day 1 Midterm 1
Day 2 Closed Curve Theorem
Day 3 Cauchy Integral Formula

Week 7 (02/22-02/26)

Day 1 Taylor Expansion for entire functions
Day 2 Louisville Theorem, Fundamental Theorem of Algebra
Day 3 Power Series for analytic functions on a disc

Week 8 (03/07-03/11)

Day 1 Mean Value Theorem
Day 2 Maximum Modulus Theorem
Day 3 Schwartz's Lemma

Week 9 (03/14-03/18)

Day 1 Morera's Theorem
Day 2 TBA
Day 3 TBA

Week 10 (03/21-03/25)

Day 1 TBA
Day 2 Midterm 2
Day 3 TBA

Week 11 (03/28-04/01)

Day 1 TBA
Day 2 TBA
Day 3 TBA

Week 12 (04/04-04/08)

Day 1 TBA
Day 2 TBA
Day 3 TBA

Week 13 (04/11-04/15)

Day 1 TBA
Day 2 TBA
Day 3 TBA