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MTH421/521 Syllabus   Spring 2025

Complex Variables (2nd ed.) S. Fisher

Week of 1/20:
Introduction
Algebra with complex numbers

Week of 1/27:
Add/Drop/Audit deadline is Tuesday
De Moivre's Theorem
Geometry in the complex plane

Week of 2/3:
Topology in the complex plane
Complex functions

Week of 2/10:
Limits
Continuity

Week of 2/17:
Presidents' Day *No class on Tuesday*
Derivatives

Week of 2/24:
Pass/Fail deadline is Wednesday
Analytic functions
The Cauchy-Riemann equations
Harmonic functions

Week of 3/3:
Green's Theorem
Line integrals
Applications

Week of 3/10:
Spring Break

Week of 3/17:
Cauchy's Theorem
Midterm exam

Week of 3/24:
Cauchy's Formula
Power series

Week of 3/31:
Implications of Cauchy's Theorem
Isolated singularities

Week of 4/7:
Laurent series
The calculus of residues
Mappings
Withdrawal deadline is Friday

Week of 4/14:
Patriot's Day: *Class* **does** *meet Tuesday*
The Riemann Mapping Theorem
Linear Fractional Transformations

Week of 4/21:
Conformal mapping

Week of 4/28:
The Schwarz-Christoffel transformation
Last class is Tuesday