OFFICIAL SYLLABUS
MATH 450-RealAnalysis I

Adopted Spring 2019
(Committee: Drs. S.-F. Chew, J. Loreaux, J. Parish, M.-S. Song)

Catalog Description. Integration; infinite series, sequences and series of functions and their properties.
Prerequisites: 250, 321 and 350 with a C or better.

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Course Outline:
Chapter 6, Integration
6.1 Riemann Integral
6.2 Integrable Functions
6.3 Properties of the Riemann Integral
6.4 Integration in Relation to Differentiation
6.5 Improper Integral

Chapter 7, Infinite Series
7.1 Convergence
7.2 Tests for Convergence
7.3 Ratio and Root Tests
7.4 Absolute and Conditional Convergence

Chapter 8, Sequences and Series of Functions
8.1 Pointwise Convergence
8.2 Uniform Convergence
8.3 Properties of Uniform Convergence
8.4 Pointwise and Uniform Convergence of Series
8.5 Power Series
8.6 Taylor Series
8.8 Projects*:
   - Part 1 Limit Superior
   - Part 3 An Everywhere Continuous but Nowhere Differentiable Function
   - Part 4 Equicontinuity

Any instructor should cover all of the material specified, additional sections are optional