
MAT 524 - Real Analysis II

TAUGHT BY: BRANDON HANSON

Meeting times: MWF, 2:00-2:50 PM

Prerequisites: A grade of B- or better in *MAT 523* or department permission.

Credits: 3

Course Description

MAT 524 is a continuation of *MAT 523* (Real Analysis I), which further develops the theory of integration. The course focuses on different spaces of functions – spaces endowed with different structures (*Banach* and *Hilbert* spaces) – and the use of these spaces in understanding a given function. For instance, L^p -spaces serve to distinguish between slowly varying functions vs. wildly oscillating functions. We will also investigate approximation of complicated functions by simpler ones, using tools like the Fourier transform. Finally, we'll use these approximations to tackle problems in other areas of math like number theory and geometry.