

FACULTY OF SCIENCE Department of Mathematics and Statistics

PURE MATHEMATICS 617 "ANALYSIS IV"

Calendar Description: H(3-0)

Analysis in abstract spaces. Function spaces.

Prerequisite: Pure Mathematics 545.

Syllabus

Topics

 $\mathcal{L}^{\mathrm{p}}\text{-spaces}$ and \mathcal{L}^{p} spaces

Normed linear spaces, Hilbert spaces

Linear Functionals, Hahn-Banach Theorem

Operators, Spectra

Operators on Finite Dimensional Spaces

Spectral Theory in Infinite Dimensional Spaces

91.09.03 BB.II