

Department of Mathematics
Faculty of Mathematics & Computer Science
PhD, Mathematics

Course Code	AM 506
Course Title	Operator Theory
Course Credits	02

Course objectives:

Here we are interested in studying functional analysis through summability theory point of view. Here our second goal is measure non compactness in non-compact operators.

Minimum Pre- requisites:

Basic courses in real Analysis and functional Analysis.

Course structure:

Normed and Paranormed Sequence spaces, α -, β -, γ - and continuous duals of the bounded , convergent, p-summable sequence spaces, Linear Metric space, Topological Linear Metric spaces, Weak Topology and weak Convergence, Symmetric and Compact Operators, Measures of Non Compactness, Matrix transformations, Difference Operators, Double sequence spaces, Fixed point Theory. (24 Lectures)

Reading suggestions:

- I. J. Maddox, Elements of Functional Analysis, Cambridge University Press-1989
- A. Willansky, Summability theory through Functional Analysis, Publisher- Amsterdam Elsevier Science Publisher-1984
- R. G. Cooke, Infinite Matrices and Sequence Spaces, Macmillan and co. Limited-1950
- F. Basar, Summability theory and its applications, Bentham Science Publisher-2012.

Evaluation and weightage:

- 40% for Quiz, Assignments and Presentations
- 20% for Mid - Term Examination
- 40% for End - Term Examination