Code	Subject Title	Cr. Hrs	Semester
MATH-430	**Functional Analysis - III**	**3**	**VIII**
Year	Discipline		
4	**Mathematics**		

Objectives:

Semi-norms

- Semi norms, locally convex Spaces
- Quasi normed linear spaces
- Bounded linear functionals
- Hahn Banach theorem

Conjugate spaces

- Second conjugate space of pl
- The Riesz representation theorem for linear functionals on a Hilbert spaces
- Conjugate space of   b a C ,
- A representation theorem for bounded linear functionals on   b a C ,

Uniform Boundedness

- Weak convergence
- The Principle of uniform boundedness
- Consequences of the principle of uniform boundedness
- Graph of a mapping and closed graph theorem

Linear transformation and complete continuity

- The closure of linear transformation
- The class of linear transforma tions that admit a closure

Recommended Books:
- G. Bachman and L. Narici, Functional Analysis, (Academic Press, New York, 1966)
- A. E. Taylor, Functional Analysis, (John Wiley and Sons, Toppan, 1958)
- G. Helmberg , Introduction to Spectral theory in Hilbert spaces , (N. H. Publishing Company 1969)
- E. Kreyszig, Introduction to Functional A nalysis with Applications, (John Wiley and Sons,
- 2004)
- F. Riesz and B. Sz. Nagay, Functional Analysis, (Dover Publications, New York, Ungar, 1965)
- W. Rudin, Functional Analysis, 2nd edition, (McGraw Hill Book Company, New York, 1991)