

ELEMENTS OF FUNCTIONAL ANALYSIS IN BANACH SPACES

HYNEK KOVARIK

Programme

In this course we will discuss some fundamental elements of functional analysis. Namely:

- Metric spaces, linear normed spaces.
- Basic elements of Lebesgue integration theory.
- Linear transformations.
- Conjugate spaces and reflexive spaces.
- Weak topology in conjugate spaces.
- Hilbert spaces and their geometry.

REFERENCES

- [1] A.Friedman: *Foundations of Modern Analysis*. Dover Publications, Inc. New York. 1980.
- [2] M. Reed, B. Simon: *Methods of Modern of Mathematical Physics, I: Functional Analysis*. Academic Press, New York-London, 1972.