**Study programme(s)**: Mathematics AN-22

**Level**: PhD studies

**Course title:** Functional analysis and the operator theory 2

**Lecturer:** Stevan Pilipović

**Status**: obligatory

**ECTS**: 10

**Requirements**: none

**Learning objectives**
Technics of operator theory

**Learning outcomes** Spectral analysis ,spectral measure and integral. Operator theory on Lp spaces with the applications

**Syllabus**
*Theoretical instruction*
Bounded and unbounded operators, Banach algebras, Sppectral analysis of bounded and unbounded operators , Masure and integral. Operators on Lp spaces
*Practical instruction*
Seminar work of a student

**Literature**
Meise, R. Vogt, D., Introduction to functional analysis, Oxford Graduate Texts in Mathematics, 2. The Clarendon Press, Oxford University Press, New York, 1997. 437 pp Functional Analysis, Walter Rudin Mc-Graw Hill, New York Halmos, Measure Theory, Graduate texts in Mathematics, 1978
Y Eidelman, V. Milman, A. Tsolomites,Functional Analysis An Introduction, Graduate Studies in Mathematics V66 (2004) S. Pilipovic, D. Seleši, Mera i Integral, Zavod za izdavanje udzbenika, BeogradMeise, R. Vogt, D., Introduction to functional analysis, Oxford Graduate Texts in Mathematics, 2. The Clarendon Press, Oxford University Press, New York, 1997. 437 pp Functional Analysis, Walter Rudin Mc-Graw Hill, New York Halmos, Measure Theory, Graduate texts in Mathematics, 1978
Y Eidelman, V. Milman, A. Tsolomites,Functional Analysis An Introduction, Graduate Studies in Mathematics V66 (2004) S. Pilipovic, D. Seleši, Mera i Integral, Novi Sad, 2007. 2012.

| **Weekly teaching load** | | | | Other: 0 |
|---|---|---|---|---|
| Lectures: 2 | Exercise: | Other forms of teaching: 0 | Student research: 6 | |

**Teaching methodology**
Classical lectures, exercises, students seminar works

**Grading method (maximal number of points 100)**

| **Pre-exam obligations** | **points** | Written exam | 50 |
|---|---|---|---|
| | | Oral exam | 50 |