Study programme(s): Mathematics (MD)

Level: doctoral studies

Course title: Algebraic logic (AL-01)

Lecturer: Rozália S. Madarász-Szilagyi

Status: elective

ECTS: 10

Requirements: none

Learning objectives:
Acquainting the students with ideas, advanced methods and techniques of Algebraic logic.

Learning outcomes:
Acquisition of ideas, advanced methods and techniques which allow conducting research which connects the concepts of mathematical logic and abstract algebra.

Syllabus:
Propositional calculus, Boolean algebras and Lindenbaum-Tarski algebras. Boolean algebras with operators and complex algebras. Relational and cyllindric algebras. Nonclassical logics and corresponding algebraic structures. Algebraizability of a logic. Abstract algebraic logic. Computer science and algebraic logic.

Literature
1. R. Madarasz, S. Crvenković, Relacione algebre, Matematički Institut, Beograd, 1992.
2. H. Andreka, I. Nemeti, I. Sain, Algebraic logic, MTA, Budapest.
3. W. Blok, D. Pigozzi, Algebraizable logics, Mem. AMS, 1989.
4. H. Andreka, D. Monk, I. Nemeti, Algebraic logic, Noth-Holland, 1991.
5. S. G. Gindikin, Algebraic logic, Springer, 1985.

Weekly teaching load				Other: 0
Lectures: 2	Exercises 0	Other forms of teaching: 0	Student research: 6	

Teaching methodology
Lecturing theory with constant student interaction.

Grading method (maximal number of points 100)

Pre-exam obligations	**points**	**Final exam**	**points**
Colloquia	50	Oral exam	50