UNIVERSITY OF DEBRECEN
Doctoral School of Informatics

Minor Field of Comprehensive Examination

Classical logic

Syllabus

Classical first-order logic; completeness theorem; Gödel's theorems; computability theory and its applications in logic; decidable and undecidable theories; basic proof theory; resolution, linear resolution; basic model theory, saturated and recursively saturated models, Löwenheim-Skolem theorems.

Bibliography

1. J. Barwise (szerk.): Handbook of Mathematical Logic, North Holland, 1993.
2. M. Ben-Ari: Mathematical Logic for Computer Science. Springer-Verlag London, 2012.
3. D. van Dalen: Logic and Structure, 5th edition. Springer-Verlag London, 2013.
4. Dragalin A., Buzási Sz.: Matematikai logika, Egyetemi jegyzet, Debrecen, 1993.
5. M. Fitting: First-Order Logic and Automated Theorem Proving. Springer-Verlag New York, 1996.
6. E. Mendelson: Introduction to Mathematical Logic, 5th edition. Chapman and Hall/CRC, 2009.
7. Pásztorné Varga K., Várterész M.: A matematikai logika alkalmazásszemléletű tárgyalása, Panem Kiadó, Budapest, 2003.