Complex exam minor subject	Classical logic
Syllabus	Syntax of first-order languages; semantics: interpretation, satisfaction, truth and models; consequence, first-order theories, proof by induction; standard model of classical first order logic, soundness of first-order logic, completeness of first-order logic; Gödel's two incompleteness theorems, diagonal lemma; 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. Formal theories: Peano arithmetic
Bibliography	 J. Barwise (szerk.): Handbook of Mathematical Logic, North Holland, 1993. M. Ben-Ari: Mathematical Logic for Computer Science. Springer-Verlag London, 2012. D. van Dalen: Logic and Structure, 5th edition. Springer-Verlag London, 2013. M. Fitting: First-Order Logic and Automated Theorem Proving. Springer-Verlag New York, 1996. E. Mendelson: Introduction to Mathematical Logic, 5th edition. Chapman and Hall/CRC, 2009.
Compulsory subjects for this minor subject	Classical first order logic
Recommended subjects for this minor subject	