Module title: Mathematical Logic
Abbreviation: 10-I=ML-102-m01

Module coordinator: Dean of Studies Informatik (Computer Science)
Module offered by: Institute of Computer Science

ECTS: 5
Method of grading: numerical grade
Duration: 1 semester
Module level: graduate

Other prerequisites:
Admission prerequisite to assessment: exercises (type and scope to be announced by the lecturer at the beginning of the course).

Contents:
Propositional logic, first-order predicate logic, proof and deduction, Gödel’s completeness theorem, Tarski theorem, Gödel’s incompleteness theorem, undecidability and nonaxiomatisability of elemental arithmetic.

Intended learning outcomes:
The students possess a fundamental and applicable knowledge in the areas of propositional logic, first-order predicate logic, proof and deduction, Gödel’s completeness theorem, Tarski theorem, Gödel’s incompleteness theorem, undecidability and nonaxiomatisability of elemental arithmetic.

Courses:
V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment:
written examination (approx. 50 to 60 minutes); if announced by the lecturer by four weeks prior to the examination date, the written examination can be replaced by an oral examination of one candidate each or an oral examination in groups (one candidate each: 15 minutes, groups of 2: 20 minutes, groups of 3: 25 minutes)
Language of assessment: German, English if agreed upon with the examiner

Allocation of places:
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Additional information:
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module appears in:
Master’s degree (1 major) Mathematics (2012)
Master’s degree (1 major) Computational Mathematics (2012)
First state examination for the teaching degree Gymnasium Computer Science (2009)