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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Sciences and Mathematics | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | Computer Science | | |
| Study Module (if applicable) | | | | Information Management, Software Development | | |
| Course title | | | | Mathematical Logic | | |
| Level of study | | | | Bachelor  Master’s  Doctoral | | |
| Type of course | | | | Obligatory  Elective | | |
| Semester | | | | Autumn Spring | | |
| Year of study | | | | first | | |
| Number of ECTS allocated | | | | 7 | | |
| Name of lecturer/lecturers | | | | Aleksandar Stamenković | | |
| Teaching mode | | | | Lectures Group tutorials  Individual tutorials  Laboratory work  Project work  Seminar  Distance learning  Blended learning  Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| An introduction to basic concepts of formal logic: the propositional and predicate calculus and applications of formal logic in automated theorem proving and logic programming. An Introduction to non-classical logic. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Propositional logic: propositional formula, interpretation, logical equivalence, satisfiability, tautologies and contradictions, semantics consequences, semantic tableaux, syntactic consequences, completeness of propositional logic, resolution, SAT solvers and DPLL algorithm.  Predicate logic: predicates, quantifiers, bound and free variables, the language of predicate logic, predicate formulas, interpretation, model, satisfactory, rolled formulas, predicate calculus, completeness of predicate logic, resolution….  An Introduction to non-classical logic: Modal Logic, Intuitionist Logic and Many-Valued Logic. | | | | | | |
| **LANGUAGE OF INSTRUCTION** | | | | | | |
| Serbian (complete course)  English (complete course)  Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)  Serbian with English mentoring Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | |
| **ASSESSMENT METHODS AND CRITERIA** | | | | | | |
| **Pre exam duties** | **Points** | | **Final exam** | | | **points** |
| **Activity during lectures** | **10** | | **Written examination** | | | **40** |
| **Practical teaching** | **50** | | **Oral examination** | | | **-** |
| **Teaching colloquia** | **-** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |