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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | **Faculty of Sciences and Mathematics** |
| **GENERAL INFORMATION** |
| Study program  | **Mathematics** |
| Study Module (if applicable) |  |
| Course title | **Universal Algebra** |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [ ] Spring |
| Year of study  |  |
| Number of ECTS allocated | 12.00 |
| Name of lecturer/lecturers | **Snežana Ilić** |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The purpose of course is to master the basic ideas, concepts and methods of universal algebra, and the basic universal algebraic constructions. Upon completion of the course, the student should gain a thorough knowledge of universal algebra, and to be able to independently apply this knowledge in other mathematical and scientific disciplines.  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Algebraic operations, definitions and examples of algebras, subalgebras, congruences and quotient algebras, homomorphisms and isomorphisms, basic algebraic structures, direct and subdirect products, pullback products, products associated with direct products, direct and inverse limits, operators on classes algebras, varieties of algebras, terms and the term algebra, free algebra, equational logic (equational theories), fully invariant congruences.  |
| **LANGUAGE OF INSTRUCTION** |
| [x] 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** | **–** |
| **Practical teaching** | **20** | **Oral examination** | **70** |
| **Teaching colloquia** | **–** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |