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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** |  |
| **GENERAL INFORMATION** |
| Study program  | Mathematics |
| Study Module (if applicable) | Mathematics |
| Course title | Introduction to algebraic structures  |
| Level of study | x Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | x Obligatory ☐ Elective |
| Semester  | ☐Autumn x Spring |
| Year of study  | First |
| Number of ECTS allocated | 8 |
| Name of lecturer/lecturers |  Prof. Snežana Ilic  |
| Teaching mode | x Lectures x Group tutorials ☐ Individual tutorials☐Laboratory work ☐ Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Students are introduced to the basics of the theory of semigroups, groups, rings and fields and qualified to use that knowledge in other mathematical and science disciplines.Students are trained to analyse and resolve different problems that require apparatus of the theory of algebraic structures*.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Some of the topics that are covered are listed as follows: groupoids, subgroupoids, homomorphisms of groupoids, direct products of groupoids, congruences and quotient groupoids, semigoups, groups- definitions and elementary properties, subgroups, homomorphisms of groups, congruences and quotient groups, normal subgroups and factor groups, isomorphism theorems, cyclic groups, subgroups of cyclic groups, direct products of cyclic groups, rings - definitions and elementary properties, homomorphisms of rings, congruences and quotient rings, ideal and quotient rings, Integral domain, fields. |
| **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** |  | **Written examination** |  |
| **Practical teaching** | **10** | **Oral examination** | **50** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |