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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 | Ordered Algebraic Structures |
| 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 | Jelena Ignjatović |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [x]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The subject Ordered algebraic structures provides a lucid and concise introduction to the basic results concerning the notion of an order. Although as a whole it is mainly intended for postgraduates, the prerequisites are minimal and selected parts can profitably be used to broaden the horizon of the advanced undergraduate. The treatment is modern, with a slant towards recent developments in the theory of residuated lattices and ordered regular semigroups.  At the end of the course a student would master basic ideas, concepts and results of the theory of ordered algebraic structures, and would be able to apply practically these knowledge in individual scientific researches within the same or some other scientific fields. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Residuated mappings, residuated lattices, Galois connections, modular, distributive, and complemented lattices, Boolean algebras, pseudo-complemented lattices, Stone algebras, Heyting algebras, ordered groups, lattice-ordered groups, representable groups, Archimedean ordered structures, ordered semigroups, naturally ordered regular and inverse Dubreil-Jacotin semigroups |
| **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** | **50** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |