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|  **UNIVERSITY OF NIŠ** |
| **I381** | **Faculty**  | **Faculty of Science and Mathematics** |
| **GENERAL INFORMATION** |
| Study program  | **Computer science** |
| Study Module (if applicable) |  |
| Course title | Data mining and pattern recognition |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | Second |
| Number of ECTS allocated | 12 |
| Name of lecturer/lecturers | Dejan Mančev |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [x]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *The purpose of the course is to introduce students to methods and machine learning algorithms for intelligent analysis of structural and non-structural data.*  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Mesurement and data. Data analysis and uncertainty. Analysis of structural data: databases, graphs and trees. Analysis of non-structural data: classification, clustering, regression. Analysis of time series. Recurrent neural network and Markov models. Self-organization maps. Finding patterns and rules.** |
| **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** | **20** | **Oral examination** | **50** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |