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| **UNIVERSITY OF NIŠ** | | | | | | |
| **IM-UI-31** | | **Faculty** | | | **Faculty of Science and Mathematics** | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Computer science** | | |
| Study Module (if applicable) | | | | Information Management | | |
| Course title | | | | Data mining | | |
| Level of study | | | | Bachelor  Master’s  Doctoral | | |
| Type of course | | | | Obligatory  Elective | | |
| Semester | | | | Autumn Spring | | |
| Year of study | | | | Second | | |
| Number of ECTS allocated | | | | 8 | | |
| Name of lecturer/lecturers | | | | Dejan Mančev | | |
| Teaching mode | | | | Lectures Group tutorials  Individual tutorials  Laboratory work  Project work  Seminar  Distance learning  Blended learning  Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| The purpose of the course is introduction to basic intelligent models and algorithms for data mining. After this course students should be able to implement and apply intelligent algorithms to different data mining problems. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Basic steps in data mining process. Preparation of data. Classification (decision tree, perceptron  algorithm, max margin classifiers). Clustering. Linear regression. Model selection and generalization.  Feed-forward and recurrent artificial neural network. Ensemble learning (random forest, boosting). Hidden  Markov models. | | | | | | |
| **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** |  | | **Written examination** | | | **25** |
| **Practical teaching** | **20** | | **Oral examination** | | | **30** |
| **Teaching colloquia** | **25** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |