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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | Control Systems |
| Study Module (if applicable) | Automatic Control, Computer Control Systems and Measurement Techniques |
| Course title | Intelligent Control Methods |
| Level of study | ☐Bachelor ⊠ Master’s ☐ Doctoral |
| Type of course | ⊠ Obligatory ☐ Elective |
| Semester  |  ⊠ Autumn ☐Spring |
| Year of study  | first |
| Number of ECTS allocated | 4 |
| Name of lecturer/lecturers | Naumović Milica, Milojković T. Marko |
| Teaching mode |  ⊠ Lectures ☐Group tutorials ☐ Individual tutorials ⊠ Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ⊠ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Understanding the modern control theory and introducing the students to techniques and selected examples of intelligent control. Based on the acquired theoretical knowledge, students should learn to successfully solve different control problems in an unconventional way using modern approaches.  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Introduction to the intelligent control. Intelligent vs. classical control. Adaptive control systems. Fuzzy control. Neural networks. Genetic Algorithms. MATLAB/Simulink based simulation of intelligent control systems. Homework and solving concrete problems during exercises facilitates students to overcome the methodological units that are processed through theoretical classes. |
| **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** | **20** | **Written examination** | **50** |
| **Projects** | **0** | **Oral examination** | **30** |
| **Teaching colloquia** | **0** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |