|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Electronic Engeeniring | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Electrical Engineering and Computing** | | |
| Study Module (if applicable) | | | | Control Systems | | |
| Course title | | | | System Identification | | |
| Level of study | | | | Bachelor  Master’s  Doctoral | | |
| Type of course | | | | Obligatory  Elective | | |
| Semester | | | | Autumn Spring | | |
| Year of study | | | | I | | |
| Number of ECTS allocated | | | | 10 | | |
| Name of lecturer/lecturers | | | | Milica Naumović, Boban Veselić | | |
| Teaching mode | | | | Lectures Group tutorials  Individual tutorials  Laboratory work  Project work  Seminar  Distance learning  Blended learning  Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| *Gain knowledge about modern system identification techniques, iterative identification methods and be familiar with a recent computer software tools for system identification. Know how to use in practice modern computer systems and software tools for system identification as well as application of identification in adaptive control systems.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **Plants classification. Identification algorithms and their convergence. Active identification. Gradient methods of identification. Single and multidimensional regression models. Nonlinear regression method. Iterative identification methods. Passive identification. Experiment planning. Forming of optimal identification algorithms. Stochastic process identification. Identification of fuzzy systems. Application of neural networks in identification. Methods for assessing the quality of identification.** | | | | | | |
| **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** | **50** | | **Written examination** | | |  |
| **Practical teaching** |  | | **Oral examination** | | | **50** |
| **Teaching colloquia** |  | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |