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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | Electrical Engineering and Computing |
| Study Module (if applicable) | Electrical Power Engineering |
| Course title | Process Control |
| Level of study | ☒Bachelor ☐ Master’s ☐ Doctoral |
| Type of course |  Obligatory X Elective |
| Semester  | ☒ Autumn ☐Spring |
| Year of study  | 3 |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Zoran Jovanovic |
| Teaching mode | ☒Lectures ☐Group tutorials ☐ Individual tutorials☒Laboratory work ☐ Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Gaining knowledge of industrial processes, the classical method of control and computer process control. Knowledge of methods for the synthesis and implementation of control systems of specific industrial processes (mechanical, electromechanical, thermal, hydraulic, chemical, nuclear ...). |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| General concepts of processes. Types of processes. Features of the process. Economic aspects of process control. Classical methods of control. Program control. Sequential process control. The application of computer technology in the process control. Real time computer controled systems. Application of microprocessors and microcomputers. Application of programmable logic controllers. Application of computers in automatization of complex processes. Hierarchical process control. Fuzzy control of processes. Neural networks in process control. The application of genetic algorithms in process control. Control of technological processes in industry. |
| **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** | **10** | **Written examination** | **20** |
| **Practical teaching** | **20** | **Oral examination** | **30** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |