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| **UNIVERSITY OF NIŠ** | | | | | | | | |
| **Course Unit Descriptor** | | | **Faculty** | | Faculty of Mechanical Engineering | | | |
| **GENERAL INFORMATION** | | | | | | | | |
| Study Program | **Mechanical Engineering** | | | | | | | |
| Study Module (if applicable) | - | | | | | | | |
| Course Title | Logical synthesis of digital systems | | | | | | | |
| 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 | Vladislav A. Blagojević | | | | | | | |
| Teaching Mode | ☒ Lectures | | | ☐ Group tutorials | | | | ☐ Individual tutorials |
| ☒ Laboratory work | | | ☒ Project work | | | | ☒ Seminar |
| ☐ Distance learning | | | ☐ Blended learning | | | | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** | | | | | | | | |
| *Introduce students to the basics of synthesis of logical digital control. The course is targeting both the theoretical and practical aspects of the logical synthesis.* | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| 1) General introduction to digital systems, 2) Introduction to discrete mathematics , 3) Boolean algebra, 4) Minimization of logic function, 5) Combinational logic circuits, 6) Sequential logic circuits, 7) TIG Welding, 8) Digital system components, 9) Realization of logical digital control. | | | | | | | | |
| **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** | | **5** | **Written Examination** | | | **50** | | |
| **Practical Teaching** | | **10** | **Oral Examination** | | | **Max. 35 (depending on Teaching Colloquia)** | | |
| **Teaching Colloquia** | | **35** | **Overall Sum** | | | **100** | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |