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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 | Intelligent Manufacturing 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 | Miodrag T. Manić |
| Teaching Mode | ☐ Lectures | ☐ Group tutorials | ☒ Individual tutorials |
| ☒ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| *Transfer knowledge to students about the principles, concept and structure of intelligent manufacturing systems. Introduction to the components of the IMS, management, and planning procedures of IMS.* |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| 1)Basics of flexible manufacturing structure. Technological basis for the design and implementation of intelligent and flexible manufacturing structure , 2)CNC machine tools as components of intelligent manufacturing systems ( IMS ), 3)Manipulating systems (industrial robots ) as a component of IMS, 3)Measuring and control systems in IMS, Systems for monitoring and diagnosis of IMS, 4)Computer Integrated Manufacturing - CIM, 5)Development trends of modern integrated software CAD / CAE / CAM system, 6)Artificial intelligence and expert systems for IMS., 7) Digital and e-manufacturing, 8)Virtual manufacturing systems . |
| **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** |