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| **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Mechanical Engineering |
| **GENERAL INFORMATION** |
| Study Program | **Engineering Management** |
| Study Module (if applicable) | - |
| Course Title | Modern Technical Systems |
| Level of Study | ☒Bachelor | ☐ Master’s | ☐ Doctoral |
| Type of Course | ☒ Obligatory | ☐ Elective |
| Semester | ☒ Autumn | ☐ Spring |
| Year of Study | II |
| Number of ECTS Allocated | 8 |
| Name of Lecturer/Lecturers | Dragoljub B. Lazarević, Nenad T. Pavlović, Mića V. Vukić, Dragoslav B. Janošević |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☐ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| *To gain the knowledge referring to modern technical systems in the field of production engineering, mechatronics, energetics and transport and logistics.**The ability to perform the analysis and basic calculation of the elements of the technical systems in the field of production engineering, mechatronics, energetics and transport and logistics.* |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| *Characteristics of modern production technical systems. Technical systems’ components. Technical systems for cutting machining, deep drawing and non-conventional machining. Controlling and executive parts of technical systems. Numerically controlled machine tools.**Introduction in mechatronics. Components of mechatronic systems. Measuring technique in mechatronics. Kinematics of mechanisms: position and velocity analysis of four-bar linkages.**Introduction to thermal and hydro power plants. Internal combustion engines. District heating plants. Pump stations.**Introduction to kinds of transportation. Non-continuous and continuous transportation machines, mobile machines, pneumatic and hydraulic transportation machines. Inter-factory transportation and public transportation. Logistic chains and transportation technical system management.* |
| **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** | **0** | **Written Examination** | **0** |
| **Practical Teaching** | **0** | **Oral Examination** | **40** |
| **Teaching Colloquia** | **60** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |