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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** | | | | | | | | |