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| **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Mechanical Engineering |
| **GENERAL INFORMATION** |
| Study Program | **Traffic engineering, transport and logistics** |
| Study Module (if applicable) | - |
| Course Title | Hydraulic and pneumatic systems of vehicles |
| Level of Study | ☐Bachelor | ☒Master’s | ☐ Doctoral |
| Type of Course | ☐Obligatory | ☒Elective |
| Semester | ☐Autumn | ☒Spring |
| Year of Study | I |
| Number of ECTS Allocated | 6 |
| Name of Lecturer/Lecturers | 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)** |
| Analysis of the concepts and parameters of hydraulic and pneumatic systems of the vehicles. Hydrodynamic and hydrostatic transmission of vehicles. Hydraulic and pneumatic brake and steeringsystems of vehicles. The design of a hydraulic and pneumatic systems of vehicles. |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| 1) Functions of the hydraulic and pneumatic systems of the vehicles, 2) Hydrodynamic transmissions of vehicles, 3) Hydrodynamic torque converters and gearboxes, 4) Hydrostatic transmissions of vehicles, 5) Control of hydrostatic transmission of vehicles, 6) Hydrodynamic and hydrostatic braking systems of vehicles 7) Hydrostatic drive mechanisms of vehiclesmanipulator, 7) Hydrostatic steering systems of vehicles, 9)Power steering, 10) Pneumatic vehicle systems, 11) Characteristics of pneumatic brake systems 12) Pneumatic drive and steering systems of additional equipment of the vehicle. |
| **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** |