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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 | Pipe transportation |
| 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 | Saša Milanović, Jasmina B. Bogdanović-Jovanović |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☐ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| *Introduction to the principles of work and theoretical bases of calculation of the different types of pipe transportation.**Understanding the characteristics of work and mastering of calculation methods of different types of pipe transportation.* |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| 1) Water supply systems, classification. 2) Operation regimes of water supply system, pipelines, pressure loss and pressure drop in pipelines. 3) Pump operating regimes in water supply systems. 4) Hydraulic calculation of main water pipeline system with reservoirs. 5) Oil pipelines - technology of oil transportation in pipelines and systems of oil heating. 6) Hydraulic calculation of pipeline for isothermal flow; Temperature drop along the oil pipelines and hydraulic calculation of pipeline in non-isothermal flow. 7) Gas pipelines - classification and elements . 8) Differential equation of gas flow. Pressure drop for isothermal gas flow. 9) Transportation of solid materials in the fluid flow - hydraulic and pneumatic conveying. 10) Physical properties of mixtures; The basic theory and parameters of transportation of inhomogeneous mixture in the fluid flow;  |
| **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** | **Max 40, depending on Teaching Colloquia**  |
| **Practical Teaching** | **5** | **Oral Examination** | **50** |
| **Teaching Colloquia** | **40** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |