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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Pedagogical Faculty in Vranje | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | Technical Education and Informatics | | |
| Study Module (if applicable) | | | | / | | |
| Course title | | | | Technical Materials | | |
| Level of study | | | | ☐Bachelor ☒ Master’s ☐ Doctoral | | |
| Type of course | | | | ☒ Obligatory ☐ Elective | | |
| Semester | | | | ☒ Autumn ☐Spring | | |
| Year of study | | | | Third | | |
| Number of ECTS allocated | | | | 6 | | |
| Name of lecturer/lecturers | | | | Goran M. Radenković, assoc. prof. | | |
| Teaching mode | | | | ☒Lectures ☐Group tutorials ☐ Individual tutorials  ☒Laboratory work ☒ Project work ☒ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| Knowledge of the basic principles in the area of fuels, lubricants and industrial water.  Knowledge of technical material in order to select the material for constructing the elements and devices and the choice of production technologies.  Acquiring the necessary knowledge for the adoption of the basic principles in the area of fuels, lubricants and industrial water as well as for managing in the systematization and terminology in practice.  To familiarize students with basic types of materials used in mechanical engineering, their structure, properties, application and processing possibilities and changes their properties. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **Theoretical study**  **Introduction. The content and significance of the matter. Problem of energy supply. Reserves and power consumption. Energy use in industrial processes and environmental protection.**  **The combustible matter. Basic concepts, types of fuel and their characteristics. Fundamentals of combustion.**  **Solid Fuels. Production method, the method of preparation and processing. Liquid fuels. Promising fuel. Gaseous fuels: natural gas, propane, butane.**  **Practical teaching:**  **Exercises are laboratory. Determine the physical and operating characteristics of fuel, lubricants and industrial water important for their application, as well as the physical, chemical and mechanical properties of engineering materials.** | | | | | | |
| **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** | | | **30** |
| **Practical teaching** | **10** | | **Oral examination** | | | **35** |
| **Teaching colloquia** | **85** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |