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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Mechanical Engineering | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Mechanical Engineering** | | |
| Study Module (if applicable) | | | |  | | |
| Course title | | | | Gearboxes and Continuous Variable Transmissions | | |
| Level of study | | | | ☐Bachelor ☐ Master’s ☒ Doctoral | | |
| Type of course | | | | ☐ Obligatory☒ Elective | | |
| Semester | | | | ☒ Autumn ☐Spring | | |
| Year of study | | | | II | | |
| Number of ECTS allocated | | | | 10 | | |
| Name of lecturer/lecturers | | | | Milčić S. Dragan, Stefanović-Marinović D. Jelena | | |
| Teaching mode | | | | ☒Lectures ☐Group tutorials ☐ Individual tutorials  ☐Laboratory work ☒ Project work ☒ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| Introducing the latest design solutions in the field of gearboxes and continuous variable transmissions, their implementation, calculation and analyses. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| * Variable transmissions. Discrete and continuous gear ratio - gearboxes and continuous variable transmissions (CVT). * Variable transmissions application. * Classification of variable transmissions. Friction variable transmissions with rigid parts. Variable transmissions with flexible parts. Planetary variable transmissions. The way of working and basic kinematic dependencies. * Gearboxes as a part of transmission in motor vehicles. Classification according to various criteria. Mechanical speed and torque conversion. Hydraulic speed and torque conversion. Electric speed and torque conversion. * Manual transmission. * Automatic transmission; semi-automatic transmission; DSG; CVT; Transmission on hybrid electric 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** |  | | **Written examination** | | |  |
| **Practical teaching** |  | | **Oral examination** | | | **50** |
| **Teaching colloquia** | **50** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |