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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.
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| **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** |