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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 | Geared Power Transmissions |
| Level of study | ☐Bachelor ☐ Master’s ☒ Doctoral |
| Type of course | ☐ Obligatory☒ Elective |
| Semester  | ☐ Autumn ☒Spring |
| Year of study  | I |
| 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 in the field of geared power transmission, their implementation, calculation and analyses. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| * Classification, characteristics and application of geared power transmissions.
* Variants of geared power transmissions design. Advantages and disadvantages of different design of geared power transmissions.
* Modular principle of design of geared power transmission.
* Planetary gear transmissions as reductors and multiplicators.
* Recent design of mechanical transmissions (*harmonic drive*, *roller drive*, *cycloid geared transmissions*).
* Special mechanical transmissions (transmissions with great transverse contact ratio, transmissions with none involute tooth gearing; transmissions for usage in robots, transmissions for shaft generators, turbine transmissions etc).
* Choice and calculation of the basic kinematic and dynamic parameters of these transmissions (transmission ratio, efficiency, loads, torques etc.)
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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** |