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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 | Power Transmissions |
| Level of study | ☒Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☐ Obligatory☒ Elective |
| Semester  | ☒ Autumn ☐Spring |
| Year of study  | III |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | 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)** |
| Student will be introduced with theoretical basis, calculation, design, functioning and application of power transmission. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| * Basic terms and definitions. Power sources types. Types, characteristics and application of power transmissions.
* Universal geared power transmissions. Types and design of universal geared transmissions. Connections between power transmission and power source.
* Planetary gear trains. Basic terms and types of planetary gear trains. Kinematics. Mounting conditions. Loads. Efficiency. Lubrication.
* Power transmissions for motor vehicle
* Power transmissions for machine tools.
* Variable transmissions. Application and types of variable transmissions. Friction elements strength calculation.
* Hydro power transmissions. Elements and types of hydrostatic power transmissions and assemblies with reductors. Hydrodynamic couplings. Hydro-mechanical transmissions.
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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** | **5** | **Written examination** |  |
| **Practical teaching** |  | **Oral examination** | **45** |
| **Teaching colloquia** | **30+20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |