|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **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.) | | | | | | |
| **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** | | | | | | |