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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 | Machine elements 2 |
| Level of Study | ☒ Bachelor | ☐ Master’s |  ☐ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☐ Autumn | ☒ Spring |
| Year of Study | II |
| Number of ECTS Allocated | 7 |
| Name of Lecturer/Lecturers | Dragan S. Milčić |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☐ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| *To familiarize students with theoretical basis, constructional forms, calculation of machine elements, production, the functioning and aplication of machine elements* |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| **Power transmission elements**. **Spur Gears:** Forms of teeth, Cycloid teeth, Involutes teeth, Systems of gear teeth, Standard proportions of gear system, Gear materials, Design consideration for gear drive, Causes of gear tooth failure, Design procedure for spur gears. **Helical Gears:**Introduction, Terms used in helical gear, Design procedure for helical gears.**Bevel Gears:**Introduction, Terms used in bevel gears. , Proportions for bevel gears, Design of bevel gear.**Worm Gears:**Introduction, Types of worms, Types of worm gears. , Terms used in worm gearing, Proportions for worms, Proportions for worm gears, Design of worm & worm gearing. **Belt & Pulley design:**Introduction, Design of flat belt & pulley. Design of V-belt and its Pulley. **Chain Drives:** Chain drives, Roller chains, Geometric relationships, Dimensions of chain components, Polygonal effect, Power rating of roller chains, Selection of Chain drives. **Clutches:** Introduction, Types of clutches, Material, Design of a disc or plate clutch, Multiple disc clutch, Cone clutch, Centrifugal clutch. |
| **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** | **10** | **Written Examination** | **0** |
| **Practical Teaching** | **10** | **Oral Examination** | **50** |
| **Teaching Colloquia** | **30** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |