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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 | Kinematics |
| Level of Study | ☒Bachelor | ☐ Master’s | ☐ Doctoral |
| Type of Course | ☒ Obligatory | ☐ Elective |
| Semester | ☒ Autumn | ☐ Spring |
| Year of Study | II |
| Number of ECTS Allocated | 6 |
| Name of Lecturer/Lecturers | Ratko G. Pavlović, Goran Janevski |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☒ Individual tutorials |
|  ☐ Laboratory work | ☐ Project work | ☐ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| The main objective of the course is to provide students theoretical knowledge from the movement geometry, geometry and elements of mechanisms. Training students to follow lectures in Dynamics, Machine elements, Fluid Mechanics and Theory of mechanisms. |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| Basic Concepts of Kinematics. Determination of Motion of a Particle – Vector and Natural. Particle Velocity. Determination of Particle Velocity in Various Types of Coordinate Systems. Particle Acceleration. Determination of Particle Acceleration. Basic Terms of Kinematics of a Rigid Body. Translation. Rotation of a Rigid Body about a Fixed Axis. Angular Velocity and Angular Acceleration of a Rigid Body. Planar Kinematics of a Rigid Body. Spherical Kinematics of a Rigid Body. Relative Motion of a Particle. Velocity and Acceleration of a particle in Relative Motion.  |
| **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** | **50** |
| **Practical Teaching** | **5** | **Oral Examination** | **Max. 50**  |
| **Teaching Colloquia** | **50** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |