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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | |  | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Mathematics** | | |
| Study Module (if applicable) | | | | Mathematical models in physics | | |
| Course title | | | | Classical theoretical physics | | |
| Level of study | | | | Bachelor  Master’s  Doctoral | | |
| Type of course | | | | Obligatory  Elective | | |
| Semester | | | | Autumn Spring | | |
| Year of study | | | | 1 | | |
| Number of ECTS allocated | | | | 7.5 | | |
| Name of lecturer/lecturers | | | | Ana M. Mančić | | |
| Teaching mode | | | | Lectures Group tutorials  Individual tutorials  Laboratory work  Project work  Seminar  Distance learning  Blended learning  Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| *The objective of this course is to develop an understanding of basic concepts and methods of classical physics and to learn about mathematical procedures that are used for solving problems of classical theoretical physics. After completing this course, students should be able to apply their knowledge of mathematical disciplines for understanding the physical laws.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **Introduction to theoretical mechanics. Basic law of dynamics in the inertial and non inertial frame of reference. Pendulum. Harmonic oscillator. Concepts of analytical mechanics. Basic concepts of electrodynamics. Maxwell equations in vacuum. Electrostatics. Electromagnetic waves.** | | | | | | |
| **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** | | | **20** |
| **Practical teaching** | **10** | | **Oral examination** | | | **30** |
| **Seminars** |  | |  | | |  |
| **Teaching colloquia** | **2 x 20** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |