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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Science and Mathematics | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Physics** | | |
| Study Module (if applicable) | | | | **General Physics** | | |
| Course title | | | | **General Theory of Relativity** | | |
| Level of study | | | | ☐Bachelor ☒ Master’s ☐ Doctoral | | |
| Type of course | | | | ☐ Obligatory ☒ Elective | | |
| Semester | | | | ☒ Autumn ☐Spring | | |
| Year of study | | | | 2 | | |
| Number of ECTS allocated | | | | 6 | | |
| Name of lecturer/lecturers | | | | Ljubiša Nešić | | |
| Teaching mode | | | | ☒Lectures ☐Group tutorials ☒ Individual tutorials  ☐Laboratory work ☐ Project work ☒ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| *Introduction to the basic concepts of the general theory of relativity. Concept of*  *time, space and causality. Extending intellectual horizon and training to deal with the open*  *problems on the front line of scientific thought.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **Historical development of the notion of gravity. Describing of the curved space-time. Vector analysis on manifolds. Elements of tensor calculus. The principle of equivalence and the space-time curvature. Einstein's field equations. Schwartzshild solution. Experimental confirmation GTR. Schwarzschild black holes.** | | | | | | |
| **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** | | | **20** |
| **Practical teaching** | **15** | | **Oral examination** | | | **20** |
| **Teaching colloquia** | **40** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |