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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) |  |
| Course title | Physics of plasmas |
| Level of study | ☐Bachelor ☐ Master’s ☒ Doctoral |
| Type of course | ☐ Obligatory ☒ Elective |
| Semester  |  ☒ Autumn ☐Spring |
| Year of study  | I |
| Number of ECTS allocated | 15 |
| Name of lecturer/lecturers | Dejan R Dimitrijević |
| Teaching mode |  ☒Lectures ☐Group tutorials ☐ Individual tutorials ☐Laboratory work ☐ Project work ☒ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Students should acquire the ability to scientifically interpret phenomena in various technological plasma processes, model the behaviour of plasma systems and participate in the scientific research in the field of plasma physics. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Linear theory of wave propagation in boundless homogeneous plasma. Waves in ideal magnetized and non-magnetized plasma: hydrodynamic and kinetic theory. Hydrodinamic theory of plasma stability. Stability of non-confined and magnetically confined plasmas. Plasma stability theory in the thermonuclear fusion research. Transport phenomena in plasmas: electrical conductivity, diffusion, thermal conductivity. |
| **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** | **20** | **Written examination** |  |
| **Practical teaching** |  | **Oral examination** | **60** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |