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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 | Applications of ionized gases |
| 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 | Nenad Milojević |
| Teaching mode |  ☒Lectures ☐Group tutorials ☒ Individual tutorials ☐Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Master the methods of quantum mechanics for application in various fields. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Fundamentals of Quantum Mechanics. Stationary states. Approximate methods for bound states. Scatering and transitions. Current aspects of quantum mechanics. Quantization of the electromagnetic field. Relativistic wave equations. Identic particles. Path integrals.** |
| **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** |  |
| **Practical teaching** |  | **Oral examination** | **70** |
| **Teaching colloquia** | **25** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |