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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Electronic Engineering  |
| **GENERAL INFORMATION** |
| Study program  | **Electrical Engineering and Computing** |
| Study Module (if applicable) | Applied Physics |
| Course title | Solid state physics |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | first |
| Number of ECTS allocated | 10 |
| Name of lecturer/lecturers | Goran Ristić |
| Teaching mode |  [x] Lectures [x] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [ ]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Introduce students to the basic processes in solids, including conductors, semiconductors and dielectrics. Theoretical knowledge related to the structure and properties of solid state, as well as to the transport of charge carriers.*  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Theoretical study will be conducted through lectures, within the following areas: Physics characteristics and classification of solid. Crystalline lattices. Interatomic forces. Zone theory of solid. Electronic states in periodic potential. Thermal motion of crystalline lattice. Transport and optical properties. The characteristics of dielectrics. Semiconductors. Electronic transport processes. Diffusion and recombination processes. Magnetic characteristics of solid. Superconductivity.** |
| **LANGUAGE OF INSTRUCTION** |
| [x] 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** | **25** |
| **Practical teaching** |  | **Oral examination** | **25** |
| **Teaching colloquia** | **50** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |