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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | **Faculty of Sciences and Mathematics** |
| **GENERAL INFORMATION** |
| Study program  | **Physics** |
| Study Module (if applicable) |  |
| Course title |  **Scattering of Heavy Particles** |
| Level of study | [ ] Bachelor [ ]  Master’s [x]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | Second |
| Number of ECTS allocated | 12 |
| Name of lecturer/lecturers | Ivan Mančev |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
|  Upon completion of the course, the student should gain a thorough knowledge of ion-atom collisions and to be able to independently apply this knowledge for reading and critical accessing of research articles as well as solving problems in this branch. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
|  Elastic scattering of ions on atoms. Inelastic ion-atom collisions at low impact energies. Non-relativistic models for high energy collisions. Excitation and ionization. Electron capture. Electronic correlations in atomic collisions.  |
| **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** |  |
| **Practical teaching** |  | **Oral examination** | **60** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |