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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 | Electromagnetism |
| Level of study | x Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | x Obligatory ☐ Elective |
| Semester  |  x Autumn ☐Spring |
| Year of study  | 2nd |
| Number of ECTS allocated | 7 |
| Name of lecturer/lecturers | Dejan R. Dimitrijević |
| Teaching mode |  x Lectures ☐Group tutorials ☐ Individual tutorials ☐Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Students will acquire the ability to understand physical laws in the field of electromagnetism and use it in order to solve various calculation problems. At the end of the course they should be able to interconnect, systematize and adequately interpret basic knowledge from various areas of classical physics.*  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Electric charge, electrostatic field and its energy in vacuum, conductors and dielectrics. Conductors and dielectrics in the electric field. Electric current and its properties in solids, liquids, gasses and vacuum. Magnetic field and its properties in vacuum and in magnetic. Diamagnetism, paramagnetism and ferromagnetism. Electromagnetic induction and its applications. Alternating current. Motion of charges in the electric and magnetic fields. Electric oscillations. Electromagnetic field and electromagnetic waves.**  |
| **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** | **10** | **Written examination** | **20** |
| **Practical teaching** |  | **Oral examination** | **30** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |