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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Electrical Engineering |
| **GENERAL INFORMATION** |
| Study program  | Electronics and Microsystems |
| Study Module (if applicable) | Electronics |
| Course title | Electromagnetic compatibility |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | 1 |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Dončov S. Nebojša |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Introduce students to the basic terms and concepts of electromagnetic compatibility (EMC), practical EMC problems and techniques and procedures to solve them. Acquisition of basic knowledge of the methods for designing circuits and devices that ensure the fulfillment of EMC standards. Understanding the principles and techniques of electromagnetic compatibility. Ability to solve EMC problems by using electromagnetic simulations on computer and to perform EMC measurements. Ability to design circuits and devices that meet EMC standards. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Introduction to electromagnetic compatibility. Sources of electromagnetic interference. Penetration through shields and apertures. Shielding theory. Aperture theory. Propagation, conductive penetrations and general multipath coupling. Electromagnetic susceptibility. Signal integrity. Electromagnetic interference control techniques. Basic principles of EMC design. Review of numerical simulation techniques for solving EMC problems on computer. EMC standards. EMC measurement methods. Auditory exercises. Practical work with software tools for EMC problem solving. EMC measurements in laboratory. |
| **LANGUAGE OF INSTRUCTION** |
| [ ] Serbian (complete course) [x]  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** | **30** |
| **Practical teaching** | **35** | **Oral examination** |  |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |