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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Occupational Safety in Niš | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | Environmental Engineering | | |
| Study Module (if applicable) | | | | / | | |
| Course title | | | | Protection Against Electromagnetic Radiation | | |
| Level of study | | | | ☐Bachelor ☒ Master’s ☐ Doctoral | | |
| Type of course | | | | ☐ Obligatory ☒ Elective | | |
| Semester | | | | ☒ Autumn ☐ Spring | | |
| Year of study | | | | I | | |
| Number of ECTS allocated | | | | 5 | | |
| Name of lecturer/lecturers | | | | Dejan Petković, Dejan Krstić | | |
| Teaching mode | | | | ☒Lectures ☒ Group tutorials ☐ Individual tutorials  ☒ Laboratory work ☒ Project work ☐ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| *Acquiring knowledge from the theory of macroscopic electromagnetic fields, EM radiation sources, and methods of calculation, measurement, and protection against EM radiation.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **Introduction, Complete system of equations of macroscopic electromagnetic field in stationary environments, EM field energy, Antennas and propagation of EM waves, EM energy transfer, Artificial sources of EM radiation, EM field of electrical devices, Low‐frequency (transformers, power lines, electrolytic tanks, etc.) and high‐frequency (radio and TV frequency, mobile communication, radars, electrothermics, etc.) EM sources, Methods for EM field calculation, Humans in EM field, Heat radiation, Ultraviolet radiation, Ionizing radiation.**  **Examples of the application of fundamental laws of EM field theory, Measurement in the field, Examples of designing a system of monitoring of and protection against EM fields of different frequencies.** | | | | | | |
| **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** | | | **20** |
| **Practical teaching** | **10+10** | | **Oral examination** | | | **35** |
| **Teaching colloquia** | **20** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |