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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Occupational Safety |
| **GENERAL INFORMATION** |
| Study program  | Environmental Engineering |
| Study Module (if applicable) | / |
| Course title | Diagnostics and Mapping of Acoustic Processes |
| Level of study | ☐ Bachelor ☐ Master’s ⌧ Doctoral |
| Type of course | ☐ Obligatory ⌧ Elective |
| Semester  | ☐ Autumn ⌧ Spring |
| Year of study  | Second year |
| Number of ECTS allocated | 10 |
| Name of lecturer/lecturers | Momir Praščević, Dragan Cvetković |
| Teaching mode |  ☐ Lectures ☐Group tutorials ⌧ Individual tutorials ☐ Laboratory work ⌧ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *The acquisition of scientific competence, academic skills and creative abilities for the diagnostics of acoustic processes, modeling noise sources and noise mapping. Learning outcome: students will develop knowledge and understanding of acoustic processes and their characteristics; knowledge, understanding and implementation of methods for the diagnostics of acoustic processes, modeling noise sources and noise mapping by using the appropriate methods and software; knowledge, understanding and application of the basic principles of noise management and environmental noise impact assessment.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Acoustic processes: noise radiation, noise propagation, noise transmission through the barrier, noise absorption. Methods for the diagnostics of acoustic processes: sound pressure method, sound intensity method, the method of surface vibration, correlation/coherence method, acoustic holography. Noise mapping ‐ demonstration and comparison between different physical models for sound propagation. Standards for the prediction of noise emissions: road, rail, air, traffic and industry. Standards for noise propagation prediction. Creating noise maps. Noise exposure maps. Conflict maps. Acoustic mapping and acoustic map calibration. Software application in acoustic mapping. Acoustic zoning. Environmental Noise Management. Environmental noise impact assessment. |
| **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** | **-** |
| **Practical teaching** | **30** | **Oral examination** | **30** |
| **Project work** | **35** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |