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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of technology |
| **GENERAL INFORMATION** |
| Study program  | **Chemical technologies** |
| Study Module (if applicable) | ECOLOGICAL ENGINEERING MODULE |
| Course title | Air protection processes |
| Level of study | ☒Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☐ Obligatory☒ Elective |
| Semester  | ☐ Autumn ☒Spring |
| Year of study  | 4nd |
| Number of ECTS allocated | 5 ECTS |
| Name of lecturer/lecturers | Ivica S. Stamenkovic |
| Teaching mode | ☒Lectures ☐Group tutorials ☐ Individual tutorials☒Laboratory work ☐ Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Students’ training for the analysis and evaluation of air pollution, projecting the protection and monitoring of the air. By combining the acquired knowledge, students will contribute to project and manufacturing organisation at selecting the location for building energetic and industrial plants, solving problems related to emission of exhausted fumes, determining the height and position of the emission source in order to protect the air.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Lectures:** 1. **Air pollution, problems, consequences: global, local (2); 2. Air pollution in the emitter-atmosphere-receptor system (2); 3. The most important pollutant which appear in atmosphere (2); 4. Sources of pollution, emission, emission factors, level of emission (2); 5. The influence of meteorological conditions on air pollution (2); 6. Time and space variation of air pollution concentration in atmosphere (2); 7. Norms and standards of the quality of air (2); 8. Air protection by pollutant release on greater heights (2); 9. Air protection by refinement of the gases – methodological approach (2); 10. Refinement of the fumes by air cleaning systems: precipitators, filters (2); 11. Refinement of the fumes in scrubbers and electrostatic precipitators (2); 12. Refinement of the fumes by absorption processes (2); 13. Refinement of the fumes by adsorption processes (2); 14. Refinement ofthe fumes by catalytic, reduction and oxidation processes (2); 15. Monitoring the quality of air (2).**

**Practical teaching:****Production and presentation of a project assignment related to certain technological process from the aspect of type and amount of air pollution which arises (30)** |
| **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** | **10** | **Written examination** |  |
| **Practical teaching** | **10** | **Oral examination** | **50** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |