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| **UNIVERSITY OF NIŠ** | | | | | | | | |
| **Course Unit Descriptor** | | | **Faculty** | | Faculty of Mechanical Engineering | | | |
| **GENERAL INFORMATION** | | | | | | | | |
| Study Program | **Energy and Process Engineering** | | | | | | | |
| Study Module (if applicable) | - | | | | | | | |
| Course Title | Air conditioning and ventilation | | | | | | | |
| Level of Study | ☐Bachelor | | | ☒ Master’s | | | | ☐ Doctoral |
| Type of Course | ☐ Obligatory | | | ☒ Elective | | | | |
| Semester | ☒ Autumn | | | ☐ Spring | | | | |
| Year of Study | I | | | | | | | |
| Number of ECTS Allocated | 6 | | | | | | | |
| Name of Lecturer/Lecturers | Bratilslav D. Blagojević | | | | | | | |
| Teaching Mode | ☒ Lectures | | | ☐ Group tutorials | | | | ☐ Individual tutorials |
| ☐ Laboratory work | | | ☒ Project work | | | | ☐ Seminar |
| ☐ Distance learning | | | ☐ Blended learning | | | | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** | | | | | | | | |
| *Explains principles and methodology for designing air conditioning and ventilation systems for comfort and industrial applications. Students acquire knowledge and skills necessary to start their engineering careers in field of designing, construction , commissioning and operation of HVAC systems, as well as information concerning energy management related to HVAC systems.* | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| 1) Introduction, 2) Thermal comfort, 3) Heating and cooling loads, 4) Main processes for conditioning of air, 5) Central air conditioning systems, 6) Mixed (water-air) air conditioning systems, 7) Local air conditioning systems, 8) Air terminal units, duct calculation and design, 9) Control of air conditioning systems, 10) Efficient supply of energy, 11) Energy consumption in buildings, 12) Ventilation of occupied spaces: principles of designing and classification, 13) Local ventilation: construction and calculation | | | | | | | | |
| **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** | | | **40** | | |
| **Practical Teaching** | | **5** | **Oral Examination** | | | **30** | | |
| **Project of specific building air conditioning system** | | **20** | **Overall Sum** | | | **100** | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |