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| **UNIVERSITY OF NIŠ** | | | | | | | | |
| **Course Unit Descriptor** | | | **Faculty** | | Faculty of Mechanical Engineering | | | |
| **GENERAL INFORMATION** | | | | | | | | |
| Study Program | **Mechanical Engineering** | | | | | | | |
| Study Module (if applicable) | - | | | | | | | |
| Course Title | Selected Topics in Air Conditioning | | | | | | | |
| Level of Study | ☐Bachelor | | | ☐ Master’s | | | | ☒ Doctoral |
| Type of Course | ☐ Obligatory | | | ☒ Elective | | | | |
| Semester | ☒ Autumn | | | ☐ Spring | | | | |
| Year of Study | II | | | | | | | |
| Number of ECTS Allocated | 10 | | | | | | | |
| Name of Lecturer/Lecturers | Bratislav 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)** | | | | | | | | |
| *Extends students knowledge in fields of complex air conditioning systems in buildings with specific demands, energy and building modelling, air conditioning system's simulation and operation optimization.*  *Students acquire new knowledge on complex air conditioning systems, building energy management systems, efficient energy supply , as well as skills and competences for individual research including completion of PhD thesis.* | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| Lectures: 1) Indoor air quality, 2) Air distribution in conditioned zones, 3) Variable air volume systems, 4) Air filtration and clean rooms, 5) Air conditioning systems in hospitals, 6) Air conditioning systems in pharmaceutical industry, 7) Air conditioning systems in hotels, 8) Automatic control of air conditioning systems, 9) Integrating systems in building and building management system, 10) Energy consumption in air conditioning systems  Individual research: 1) Building energy modelling, efficient energy supply, air conditioning system optimization 2) Training on real representative building including analysis of air conditioning system operation | | | | | | | | |
| **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** | | **-** | **Seminar** | | |  | | |
| **Practical Teaching** | | **-** | **Overview and analysis of training building systems** | | |  | | |
| **Teaching Colloquia** | | **-** | **Overall Sum** | | |  | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |