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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Occupational Safety in Niš |
| **GENERAL INFORMATION** |
| Study program  | Occupational Safety |
| Study Module (if applicable) | / |
| Course title | Thermal Comfort in Occupational Environment |
| Level of study | ☒Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory ☐ Elective |
| Semester  | ☒ Autumn ☐Spring |
| Year of study  | 3 |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Miomir Raos |
| 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 to solve specific problems of microcomfort in occupational environment. Students’ ability to analyze, synthesize, and predict solutions and all consequences of unsolved occupational thermal comfort problems; to develop critical thinking regarding thermal comfort in occupational environment; to solve specific problems of thermal comfort in occupational environment.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Elements of occupational thermal comfort. Effective temperature. Heat transfer fundamentals. Heating, division of heating systems, heat exchangers, central heating, water, steam, and air heating, heating bodies, ducting and armature, central heating boilers, central heating system calculation, hazards, and safety measures. Principles of air circulation. General and local ventilation. Ventilation for comfort of occupational environment. Ventilation for technological processes. Ventilation for reducing hazard from fire and explosions. Ventilation system calculation. Local specific‐operation ventilation. Ventilation system elements. Ventilators. Ventilation system testing. Humid air (thermodynamic properties) and air processing for airconditioning. I‐X diagram for humid air. Comfort conditions in occupational environment. Heat gains and losses in air‐conditioned rooms. Types of airconditioning systems. Elements of air‐conditioning systems. Air processing during winter and summer. Calculation of air‐conditioning installations. Cooling fluids, compressor cooling machine, heat pump. |
| **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** | **20** |
| **Practical teaching** | **20** | **Oral examination** | **20** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |