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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Occupational Safety in Niš |
| **GENERAL INFORMATION**  |
| Study program  | Fire Protection Engineering |
| Study Module (if applicable) | / |
| Course title | Fire Dynamics |
| Level of study | ☐Bachelor ☒ Master’s ☐ Doctoral |
| Type of course | ☐ Obligatory ☒Elective |
| Semester  | ☒ Autumn ☐Spring |
| Year of study  | First year |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Dušica Pešić |
| Teaching mode | ☒ Lectures ☐Group tutorials ☐ Individual tutorials ☐Laboratory work ☒ Project work ☒ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Students will be able to understand the fire as a dynamic process occurring in time and space. Acquiring knowledge about the phenomena accompanying fire dynamics and thermodynamics in order to assess the risk of fire, with the aim to apply an integrated system of fire protection.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Fire development stages. Basic fire development parameters within individual development stages. Phenomena accompanying fire dynamics (flashover, backdraft, boiling liquid expanding vapour explosion (BLEVE)). Fire dynamics in time and space (both indoors and outdoors). Fire thermodynamics (gas mixture of combustion products and air as an open thermodynamic system, differential equations of mass and energy conservation, product mixture components, thermal and temperature fire regime). Modelling and simulation of fire dynamics. |
| **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** |