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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 | Heat and mass transfer in fluidized systems |
| 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 | Mladen M. Stojiljković, Branislav V. Stojanović, Jelena N. Janevski |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☒ Laboratory work | ☒ Project work | ☐ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| To enable students to independently and on scientific principles discussed and resolved phenomena of heat exchange and mass transfer in fluidized systems and set the appropriate models for mathematical modeling of these processes |
| Syllabus (brief outline and summary of topics, max. 10 sentences) |
| 1) The phenomenon of fluidization. 2) The pressure drop in the layer. 3)The minimum fluidization velocity, 4) Removal of solid particles and boundaries of fluidized bed existence, 5) Characteristics of bubbles, 6) The expansion of the fluidized bed, 7) Mixing and circulation of solid particles in a fluidized bed, 8) Models of fluidization, 9) Drying in fluidized bed 10) The combustion in a fluidized bed, 11) The basic characteristics of a fluidized bed apparatus  |
| **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** | **50** |
| **Practical Teaching** | **10** | **Oral Examination** | **Max. 35 (depending on Teaching Colloquia)** |
| **Teaching Colloquia** | **35** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |