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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 | Numerical Simulations of Transport Processes in Energy and Process Engineering | | | | | | | |
| 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 | Žarko M. Stevanović, Mića V. Vukić, Miloš M. Jovanović, Predrag M. Živković | | | | | | | |
| Teaching Mode | ☒ Lectures | | | ☐ Group tutorials | | | | ☐ Individual tutorials |
| ☐ Laboratory work | | | ☒ Project work | | | | ☒ Seminar |
| ☐ Distance learning | | | ☐ Blended learning | | | | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** | | | | | | | | |
| *To gain new knowledge in the field of numerical simulations in energy and process engineering. To enable students to independently use CFD software. Carry on the experience in using CFD software.* | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| 1) Concept of software for numerical simulation in energy and process engineering. 2) Structures of modern software for momentum, heat and mass transfer. 3) Specifics of numerical simulations in energy and process engineering. 4) Accuracy of numerical simulations. 5) Strategies to improve the accuracy of a numerical simulation. 6) Economic indicators of numerical simulations. | | | | | | | | |
| **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** | | **-** | **Written Examination** | | | **-** | | |
| **Practical Work** | | **50** | **Oral Examination** | | | **Max. 50** | | |
| **Teaching Colloquia or Seminar** | | **-** | **Overall Sum** | | | **100** | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |