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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 | Industrial Furnaces | | | | | | | |
| Level of Study | ☒Bachelor | | | ☐ Master’s | | | | ☐ Doctoral |
| Type of Course | ☐ Obligatory | | | ☒ Elective | | | | |
| Semester | ☒ Autumn | | | ☐ Spring | | | | |
| Year of Study | IV | | | | | | | |
| Number of ECTS Allocated | 6 | | | | | | | |
| Name of Lecturer/Lecturers | Mladen M. Stojiljković | | | | | | | |
| Teaching Mode | ☒ Lectures | | | ☒ Group tutorials | | | | ☐ Individual tutorials |
| ☒ Laboratory work | | | ☐ Project work | | | | ☒ Seminar |
| ☐ Distance learning | | | ☐ Blended learning | | | | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** | | | | | | | | |
| *Introduce students to the basics of industrial furnaces (materials, fuels, combustion, heat transfer), classification, principles of calculations and sizing, as well as different types of furnaces. Students are supposed to acquire knowledge for industrial furnaces design and maintenance.* | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| (1) Materials of industrial furnaces. (2) Fuels and combustion. (3) Thermal fundamentals. Gases flow. Heat transfer. Metal heating. Air heating. Mass and heat balance. (4) Elements and equipment. (5) Classification and principles of calculations. (6) Furnaces for metal heating. (7) Furnaces for metal melting. (8) Furnaces in non-metal industry. (9) Furnaces in chemical industry. (10) Furnaces for waste combustion. | | | | | | | | |
| **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** | | | **Max. 50 (depending on pre exam duties)** | | |
| **Practical Teaching** | | **5** | **Oral Examination** | | | **50** | | |
| **Teaching Colloquia** | | **5+5=10** | **Overall Sum** | | | **100** | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |