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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 | Selected Topics in Welding Technologies |
| 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 | Miroslav M. Mijajlović, Dragan S. Milčić, Dušan S. Stamenković |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☐ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| *Adopted knowledge in welding technologies; To know-how and why to use specified parameters for welding technologies also to investigate their influence on welded structures; Application of adopted knowledge and skills on specified topics.* |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| 1) Basics of welding technologies. Theoretical and realistic model of the welding process, application field of welding technologies, power supplies for arc-based welding technologies, FEA in welding technologies, 2) Conventional welding technologies, Manual metal arc welding, Shielded Metal Arc Welding, Tungsten Inert Gas Welding, Submerged Metal Arc Welding, Oxy-fuel Welding technologies etc, 3) Nonconventional welding technologies, 4) Fully automatized technologies and robotics, 5) Welding of polymers. Welding of ceramics and composite materials, 6) Reparatory welding, Spraying and hard facing, Metallization, Special technologies, 7) Investigation of welded joints, 8) Phenomena of cracking in welded joints, 9) Health and safety while welding. Standards and regulations. |
| **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** | **0** | **Written Examination** | **0** |
| **Practical Teaching** | **0** | **Oral Examination** | **50** |
| **Teaching Colloquia** | **50** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |