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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 | Non-conventional methods |
| Level of Study | ☒Bachelor | ☐ Master’s | ☐ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☐ Autumn | ☒ Spring |
| Year of Study | IV |
| Number of ECTS Allocated | 5 |
| Name of Lecturer/Lecturers | Dragoljub B. Lazarevic |
| 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 the theoretical and practical knowledge referring to the non-conventional machining processes, designing tools for non-conventional processes and determination of the process parameters for particular parts construction.* |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| Non-conventional methods of metal forming: explosive forming, forming with gas mixture, forming with magnetic field, hydraulic shocks etc. Non-conventional methods with material removal: Discharge Machining (EDM), Electrochemical Machining (ECM), Laser Beam Machining (LBM), Abrasive Jet Machining (AJM), Plasma Arc Cutting (PAC), Electron Beam Machining (EBM) and combined processes. Processing principles, theoretical basis, characteristics of the processes, technological parameters, tools and machines related to the all processes to be considered during this course. Writing programs for the numerical control machine tools for non-conventional processes for concrete parts. |
| **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** | **0** |
| **Practical Teaching** | **0** | **Oral Examination** | **20** |
| **Teaching Colloquia** | **70** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |