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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 | Additive Technologies | | | | | | | |
| Level of Study | ☒Bachelor | | | ☐ Master’s | | | | ☐ Doctoral |
| Type of Course | ☐ Obligatory | | | ☒ Elective | | | | |
| Semester | Autumn | | | ☒ Spring | | | | |
| Year of Study | IV | | | | | | | |
| Number of ECTS Allocated | 8 | | | | | | | |
| Name of Lecturer/Lecturers | Miroslav Trajanovic | | | | | | | |
| 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 additive technologies (Rapid Prototyping). Students are trained to understand the principles, importance and the advantages and disadvantages of certain AT compared to conventional technologies;*  *to decide in which case the selection of additive technology is economically justified; to choose, based on the required characteristics of a product, the best and economically cost-effective additive technology , material and RP machine. The course is targeting both the theoretical and practical aspects of additive technologies.* | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| 1) General introduction to additive manufacturing technologies, 2) Process of building a prototype, 3) Stereolithography, 4) Fused Deposition Modeling, 5) 3D printing, 6) Selective Laser Sintering, 7) Electron Beam Melting , 8) Laminated Object Manufacturing, 9) New AT, 10) Materials for AT, 11) AT in biomedical engineering , 12) Rapid Tooling, 13) Rapid Manufacturing, 14) Shortcomings and future development of AT | | | | | | | | |
| **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** | | | **40** | | |
| **Practical Teaching** | | **50** | **Oral Examination** | | | **0** | | |
| **Teaching Colloquia** | | **0** | **Overall Sum** | | | **100** | | |
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