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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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