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| **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Mechanical Engineering |
| **GENERAL INFORMATION** |
| Study Program | **Manufacturing & Information Technologies** |
| Study Module (if applicable) | - |
| Course Title | Manufacture of medical devices and implants |
| Level of Study | ☐ Bachelor | ☒ Master’s | ☐ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☐ Autumn | ☒ Spring |
| Year of Study | I |
| Number of ECTS Allocated | 6 |
| Name of Lecturer/Lecturers | Miodrag T. Manić, |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☒ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| *The acquisition of skills to analyze, design and manufacturing of medical devices, with special emphasis on the skeletal prosthetics.* |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| 1) Medical implants, definitions, types, forms and purposes., 2) Legal and ethical standards in the production and application of medical supplies, 3) Geometrical characteristics of denture upper and lower extremities. 4) CAD modeling of implants, 5) Materials for prosthetic devices, criteria for the selection and testing of materials, 6) Traditional and Additive technologies for the production of implants and devices, 7) Surface treatment , 8) Design customized implants, 9) Tissues Engineering and scaffold. |
| **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** | **20** |
| **Practical Teaching** | **10** | **Oral Examination** | **20**  |
| **Teaching Colloquia** | **40** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |