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| **UNIVERSITY OF NIŠ** | | | | | | | | |
| **Course Unit Descriptor** | | | **Faculty** | | Faculty of Mechanical Engineering in Nis | | | |
| **GENERAL INFORMATION** | | | | | | | | |
| Study Program | **Mechanical Engineering** | | | | | | | |
| Study Module (if applicable) | - | | | | | | | |
| Course Title | Integration and interoperability | | | | | | | |
| Level of Study | Bachelor | | | ☐ Master’s | | | | x Doctoral |
| Type of Course | ☐ Obligatory | | | ☒ Elective | | | | |
| Semester | ☐ Autumn | | | ☒ Spring | | | | |
| Year of Study | I | | | | | | | |
| Number of ECTS Allocated | 10 | | | | | | | |
| Name of Lecturer/Lecturers | Miroslav D. Trajanovic | | | | | | | |
| Teaching Mode | ☒ Lectures | | | ☐ Group tutorials | | | | ☐ Individual tutorials |
| ☒ Laboratory work | | | x Project work | | | | x Seminar |
| ☐ Distance learning | | | ☐ Blended learning | | | | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** | | | | | | | | |
| To enable students to perform the independent, methodologically founded research in the field of systems integration and interoperability. | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| * Basic concepts of systems integration and interoperability * Enterprise models and architectures: Zachman framework, TOGAF (The Open Group Architecture Framework), DoDAF (DoD Architecture Framework), ISO 15704, EN/ISO I9439, IEEE 1471 * Architectures and frameworks for enterprise interoperability: LISI (Levels of Information Systems Interoperability), IDEAS interoperability framework, ATHENA interoperability framework, EUML (Enterprise Unified Modeling Language), INTEROP NoE interoperability framework * Semantic interoperability * Technologies for enabling systems interoperability: Software agents, Ontology interoperability, Model Driven Engineering, Service Oriented Computing * Integration and interoperability in ubiquitous computing   Non-functional aspects of integration and interoperability: security, trust, Quality of Service, etc. | | | | | | | | |
| **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** | |  | **Written Examination** | | |  | | |
| **Practical Teaching** | | **70** | **Oral Examination** | | | **30** | | |
| **Teaching Colloquia** | |  | **Overall Sum** | | | **100** | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |