



# UNIVERSITY OF NIŠ

**Course Unit Descriptor**

**Faculty**

Faculty of Mechanical Engineering in Niš

## GENERAL INFORMATION

Study Program	<b>Mechanical Engineering</b>		
Study Module (if applicable)	-		
Course Title	Integration and interoperability		
Level of Study	Bachelor	<input type="checkbox"/> Master's	x Doctoral
Type of Course	<input type="checkbox"/> Obligatory	<input checked="" type="checkbox"/> Elective	
Semester	<input type="checkbox"/> Autumn	<input checked="" type="checkbox"/> Spring	
Year of Study	I		
Number of ECTS Allocated	10		
Name of Lecturer/Lecturers	Miroslav D. Trajanovic		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	x Project work	x Seminar
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Blended learning	<input type="checkbox"/> 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

<b>Pre exam Duties</b>	<b>Points</b>	<b>Final Exam</b>	<b>Points</b>
<b>Activity During Lectures</b>		<b>Written Examination</b>	
<b>Practical Teaching</b>	<b>70</b>	<b>Oral Examination</b>	<b>30</b>
<b>Teaching Colloquia</b>		<b>Overall Sum</b>	<b>100</b>

**\*Final examination mark is formed in accordance with the Institutional documents**