

<b>Study Programme:</b> Information Technologies		
<b>Course Unit Title:</b> Modeling of Information Systems		
<b>Course Unit Code:</b> IT303		
<b>Name of Lecturer(s):</b> Danijela Boberić Krstićev		
<b>Type and Level of Studies:</b> Bachelor Academic Degree		
<b>Course Status (compulsory/elective):</b> Compulsory		
<b>Semester (winter/summer):</b> Winter		
<b>Language of instruction:</b> Serbian (primary), English (secondary)		
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face		
<b>Number of ECTS Allocated:</b> 7		
<b>Prerequisites:</b> None		
<b>Course Aims:</b> Educating students how to make good specification and model of an information system. Modelling of information systems using unified modelling language – UML.		
<b>Learning Outcomes:</b> Knowledge of syntax and semantics of unified modelling language. Student is able to make analysis of complex system, and to model different aspects of system using UML language		
<b>Syllabus:</b> <i>Theory</i> Overview of methodologies regarding information system modelling. Unified modelling language -UML. Basic concepts of object-oriented approach in system modelling. Modelling systems using use cases. Static, dynamic and physical models. Applying UML in system modelling. Examples of models of systems. <i>Practice</i> Modelling of individual aspects of the system using appropriate UML diagrams. Drawing diagrams using the CASE (Computer-aided software engineering) tools that support UML 2.0 and higher.		
<b>Required Reading:</b> 1. O'Docherty, M., <i>Object-Oriented Analysis and Design: Understanding System Development with UML 2.0</i> , John Wiley & Sons, Ltd., 2005. 2. Bruegg, B., Dutoit, H. A., <i>Object-Oriented Software Engineering Using UML, Patterns, and Java</i> , Prentice Hall, 2010 3. Seidl, Martina, et al. <i>UML@ classroom: An introduction to object-oriented modeling</i> . Springer, 2015.		
<b>Weekly Contact Hours:</b> 5	<b>Lectures:</b> 3	<b>Practical work:</b> 2
<b>Teaching Methods:</b> Blackboard and computer equipment are used in the lectures for explanation of teaching contents. Students are introduced with object-oriented analysis and design of system. Theoretical instruction goes through the specification of an information system starting from the activities of gathering user requirements to system design. The specification covers only the first three phases of waterfall model of system development (planning, analysis and design). The exercises are carried out in a specialized computer classroom, which is equipped with appropriate hardware and software equipment. Knowledge of students is checked by two tests and project. Tests are done on computers and they can verify the ability of students to model certain aspects of the system using a single UML diagram. The project is done in teams of 3-4 students		

and consists of creating complete specifications of given information system. At the oral exam, students answer questions related to object-oriented analysis and design of system.

**Knowledge Assessment (maximum of 100 points): 100**

<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Test 1	15	written exam	
Test 2	25	oral exam	40
Project	20	.....	

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.