

<b>Course title:</b> System Development (ID013)		
<b>Lecturer(s):</b> Mirjana K. Ivanović, Srđan M. Škrbić		
<b>Status:</b> elective		
<b>ECTS:</b> 7		
<b>Requirements:</b> none		
<b>Learning objectives</b> The objective is the synthesis and taxonomy of many techniques of (software) systems development. The methodological aspects of development are also covered.		
<b>Learning outcome</b> At the end of the course it is expected from a successful student to be able to: <ul style="list-style-type: none"> <li>- critically asses and research key concepts in software system development</li> <li>- critically asses alternatives in system development, dependant on the requirements</li> <li>- apply research methods in the field of system development</li> </ul>		
<b>Syllabus</b> <i>Theory</i> Review of research in this field: theoretical bases, elements, software tools - CASE (Computer-aided software engineering) tools and components. Current trends in the research area, for example. Model-Driven Development MDD, aspect-oriented programming, methodologies for developing agent systems. Overview of different development frameworks and platforms, security and testing of software systems. Domain-specific languages. Artifact based system development. <i>Practice</i> ---		
<b>Recommended literature</b> 1. Len Bass, Rick Kazman, Paul Clements, Software Architecture in Practice, Addison Wesley, second edition. 2. UML 2.1.1, <a href="http://www.omg.org/technology/documents/formal/uml.htm">http://www.omg.org/technology/documents/formal/uml.htm</a> 3. OMG Model Driven Architecture, <a href="http://www.omg.org/mda">http://www.omg.org/mda</a> 4. Bordini, R.H., Dastani, M., Dix, J., Seghrouchni, A.E.F. (Eds.): Multi-Agent Programming: Languages, Tools and Applications, Springer (2009)		
<b>Weekly teaching load</b>	Lectures:3	Student research:0
<b>Teaching methodology</b> Lectures are organized using classic teaching methods with use of a projector. Students independently explore various research topics, present and discuss results with other students and the lecturer.		
<b>Grading method (maximal number of points 100)</b> Seminar paper 60 points, Oral examination 40 points		