

## Specification for the book of courses

<b>Study program</b>		Computing and Informatics		
<b>Module</b>		Software Engineering		
<b>Type and level of studies</b>		Master studies		
<b>The name of the course</b>		Advanced Software Engineering		
<b>Lecturer (for lectures)</b>		Rančić D. Dejan, Milosavljević Lj. Aleksandar		
<b>Lecturer/associate (for exercises)</b>		Mihajlović T. Vladan		
<b>Lecturer/associate (for OFE)</b>				
<b>Number of ECTS</b>		4	<b>Course status (obligatory/elective)</b> Elective	
<b>Prerequisites</b>				
<b>Course objectives</b>		Mastering advanced methods for the development and evolution of software and methods for measuring the quality of software products and processes.		
<b>Course outcomes</b>		Theoretical and practical knowledge of advanced methods, techniques, and tools for developing and evolving software products and measuring the quality of software products and processes.		
<b>Course outline</b>				
<b>Theoretical teaching</b>		A brief overview and history of software engineering. Software evolution. Software metrics. Software cost estimation. Quality management. Improving the software process. Agile methods for software development. Introduction to Scrum. User stories. Agile planning and evaluation. Configuration management. Code control systems. Software reuse. Software engineering based on components. Prototype. Developing security-sensitive software. Real-time software development.		
<b>Practical teaching (exercises, OFE, study and research)</b>		Getting acquainted with technologies and tools to support software engineering.		
<b>Textbooks/references</b>				
1		I. Sommerville, Software Engineering, 9th ed., Addison-Wesley, 2011.		
2		K. Rubin, Essential Scrum: A Practical Guide to the Most Popular Agile Development Process, Addison-Wesley, 2012.		
3		M. Cohn, Agile Estimating and Planning, Prentice Hall, 2005.		
4		R. Pressman, Software Engineering A Practitioner's Approach, 7th ed., McGraw-Hill, 2010.		
5		C. Jones, Software Engineering Best Practices, McGraw-Hill, 2010.		
<b>Number of classes of active education per week during semester/trimester/year</b>				
<b>Lectures</b>	<b>Exercises</b>	<b>OFE</b>	<b>Study and research work</b>	<b>Other classes</b>
2	1	0		
<b>Teaching methods</b>		Lectures, auditory exercises, independent student work on a project.		
<b>Grade (maximum number of points 100)</b>				
<b>Pre-exam duties</b>		<b>Points</b>	<b>Final exam</b>	<b>Points</b>
<b>Activity during lectures</b>			<b>Written exam</b>	
<b>Exercises</b>		30	<b>Oral exam</b>	40
<b>Colloquia</b>				
<b>Projects</b>		30		