

Study Programme: Information Technologies			
Course Unit Title: Software Testing			
Course Unit Code: IT625			
Name of Lecturer(s): Gordana Rakić			
Type and Level of Studies: Bachelor Academic Degree			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Summer			
Language of instruction: Serbian (primary), English (secondary)			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 7			
Prerequisites: None			
Course Aims: The course aims to present and critically analyze current software testing techniques, particularly the importance of formal methods in testing.			
Learning Outcomes: <i>Minimal:</i> At the end of the course, it is expected that a successful student is able to critically assess the importance of software testing and assess the need and usefulness of formal methods during testing. <i>Desirable:</i> At the end of the course, it is expected that a successful student developed an integrated approach to software testing and formal theories.			
Syllabus: <i>Theory</i> Theoretical basis for testing, structural testing, functional testing, the basis for combining formal methods and testing, formal methods based on the model, testing using finite state machines, testing using process algebra, testing using algebraic specification, mutation testing, testing using UML dynamic models, temporal logic and model of checking models and their role in testing and the process of managing software testing. <i>Practice</i> Analysis of study examples.			
Required Reading: 1. Paul Ammann, Jeff Offutt, Introduction to Software Testing, 2nd Edition, Cambridge University Press, 2016.			
Weekly Contact Hours: 4	Lectures: 2	Practical work: 2	
Teaching Methods: At lectures, classical methodology is applied, through usage of a beam-projector. At exercises traditional methods of teaching are applied, through using a projector, to analyze study examples, as well as practical exercises on computers to practice the principles introduced and to get familiar with the recommended tools.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	Points

Active class participation	0	written exam	40
Practical work	60	oral exam	0
Preliminary exam(s)	0	
Seminar(s)	0		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			