

Basic data of the subject			
Academic unit:	Faculty of Engineering and Informatics Applied Informatics		
Title of the subject:	Software Testing		
Level:	Bachelor		
Course Status:	Elective		
Year of studies:	III		
Number of hours per week:	3		
Value of Credits - ECTS:	5		
Time / location:			
Course lecturer:	Prof.Ass.Dr.Dhuratë Hyseni		
Contact details:	Dhurate.hyseni@ushaf.net		
Course Description:	<p><i>This course introduces students to the basic concepts of software testing. Software Testing Life Cycle (STLC) is defined as a series of activities that we perform to perform software tests. Software Testing Life Cycle refers to a testing process with specific steps. We need to perform many steps in a specific software delivery specification give the Services object. Therefore, in delivering STLC we make the realization of every best planned and systematic service.</i></p>		
Objectives of the course:	<p><i>This course provides in depth knowledge about techniques for software testing, which aims at preparing students to successfully complete software development projects.</i></p>		
Expected learning outcomes:	<p><i>Upon successful completion of this course, student will be able to:</i></p> <ul style="list-style-type: none"> • <i>Design test cases for various levels of software testing that include unit testing, integration testing, system testing and acceptance testing;</i> • <i>Use techniques for black box testing,</i> • <i>Use techniques for white box testing,</i> • <i>Use various testing tools such as xUnit, NUnit, JUnit, PHPUnit, TestNG, etc.;</i> • <i>Stress and overload testing;</i> • <i>Perform analysis and static testing.</i> 		
Contribution to the student load (which must correspond with learning outcomes)			
Activity	Hour	Day/Week	In total
Lectures with numerical exercises	3	15	45
Internship			
Contacts with teacher / consultations			
Field exercises			
Midterm, seminars and projects.	3	2	6
Homework			
Self-learning time student (at the library or	3	15	45

at home)			
Final preparation for the exam	7	2	14
Time spent on evaluation (tests, quiz and final exam)			
Projects and presentations.	3	5	15
Total			125
Teaching methodology:			
	<p><i>The course takes 15 weeks with 2 hours of lectures and 2 hours weekly individual and group exercises.</i></p> <p><i>Exercises will be held in the form of individual and group work in which concrete examples will be discussed.</i></p> <p><i>Active participation is extremely important so students are encouraged to attend lectures and exercises regularly and contribute to the discussions that take place in lectures.</i></p> <p><i>Lectures, exercise, individual work, discussions and group work.</i></p>		
Assessment methods:	<i>Practical project 30 %, Final Exam 70 %</i>		
The ratio of theory and practice:	<i>70% theory with exercises and 30% laboratory work.</i>		
Literature			
Basic Literature:	<p><i>1. Software Testing Foundations. Second Edition, Andreas Spillner, Tilo Linz, and Hans Schaefer. Rocky Nook, Inc. 2007. ISBN 9781 9339 5208 6.</i></p>		
Additional Literature:	<p><i>2. SOFTWARE TESTING Foundation Guide. Second Edition. Brian Hambling (Editor)</i></p>		
Designed learning plan			
Week:	Lectures and exercises to be held		
Week one:	<i>Software testing foundations.</i>		
Week two:	<i>Software testing cycle.</i>		
Week three:	<i>Unit testing.</i>		
Week four:	<i>Integration testing.</i>		
Week five:	<i>System testing.</i>		
Week six:	<i>Acceptance testing.</i>		
Week seven:	<i>Test 1</i>		
Week eight:	<i>Testing software systems after addition of new modules.</i>		
Week nine:	<i>Static testing and analysis.</i>		
Week ten:	<i>Black box testing techniques.</i>		
Week eleven:	<i>White box testing techniques.</i>		
Week twelve:	<i>State transition testing.</i>		
Week thirteen:	<i>Stress and overload testing.</i>		
Week fourteen:	<i>Test 2</i>		
Week fifteen:	<i>Subject Summary.</i>		
Academic policies and rules of conduct			
<i>Regular attendance of lectures and exercises is necessary, as well as active participation with discussion and solution of tasks. Not impeding the progress required for learning using mobile</i>			

phones turned off or in silent mode.