

Course Name : Software Testing and Quality Assurance

Course Code	Course Type	Regular Semester	Lecture (hours/week)	Seminar (hours/week)	Lab. (hours/week)	Credits	ECTS
CMP 316	B	Spring	2.00	0.00	2.00	3.00	5.00

Lecturer	Damiana Teliti, Msc
Assistant	
Course language	Albanian
Course level	Bachelor
Description	The module presents a systematic approach to software testing within the software life cycle, based on the students' knowledge of software (at least Level 2/I). Through broad and in-depth coverage, the module prepares students to make an effective contribution to software testing as professional software engineers.
Objectives	The module presents a systematic approach to software testing within the software life cycle, based on the students' knowledge of software (at least Level 2/I). Through broad and in-depth coverage, the module prepares students to make an effective contribution to software testing as professional software engineers.
Core Concepts	

Course Outline

Week	Topic
1	Introduction to Software Testing, Levels of Software Testing, and Key Activities.
2	Analysis of Priorities and Risks, Testing Strategies, Implementation.
3	Functional Testing.
4	Equivalence Class Testing.
5	Decision Table Testing.
6	Designing Test Cases, Evaluating Testing.
7	Structural Testing, Data Flow Testing.
8	Midterm Exam.
9	Integration and System Testing, Managing the Testing Process.
10	Documentation and Standards, Testing Tools.
11	Introduction to Software Quality (Causes of Defects, Objectives, SQA Activities).
12	Quality Assurance Challenges.
13	Characteristics of the SQA Process Environment, Software Quality Process.
14	Components of SQA.
15	Review
16	Final Exam

Prerequisites	The student must attend the course at a minimum rate of 75%.
Literature	• Systematic Software Testing by R Craig & SP Jaskiel, Artech House, 2002.
References	• Lessons Learned in Software Testing: A Context-Driven Approach, C Kaner, J Bach & B Pettichord, Wiley Europe, 2002.

Course Outcome

1	Describe key techniques and standards in software testing.
2	Explain and evaluate strategies for software testing throughout the cycle and individual phases.
3	Produce appropriate documentation for test management, including test plans, test programs, and monitoring test progress.
4	Specify and design test cases and execute a testing procedure for selected issues.

Course Evaluation

In-term Studies	Quantity	Percentage
Midterms	1	25
Quizzes	0	0
Projects	1	25
Term Projects	0	0
Laboratory	0	0
Class Participation	1	10
Total in-term evaluation percent		60
Final exam percent		40
Total		100

ECTS Workload (Based on Student Workload)

Activities	Quantity	Duration (hours)	Total (hours)
Course duration (Including the exam week: 16x Total hours of the course)	16	4	64
Study hours outside the classroom (Preparation, Practice, etc.)	14	4	56
Duties	1	2	2
Midterms	1	2	2
Final Exam	1	2	2
Other	0	0	0
Total Work Load			126
Total Work Load / 25 (hours)			5.04
ECTS			5.00