

Course related to Professional Ethics

SEM	Course Code	Elective I: Software Testing	Total Marks: 100		Hours per Week	Credits
			CIA: 25	ESE: 75		
V	17UAJET505				5	4

Objectives: To enable the students to understand the fundamentals and need for software testing and various levels of Software testing.

Course Outcome: On Completion of this course the students will be able to

- CO1 Understand the basic concepts Testing
- CO2 Understand the types of Testing Concept.
- CO3 Know the need of testing.
- CO4 Validate the software by Testing.
- CO5 Select the Manual or Automation Tools for software testing.

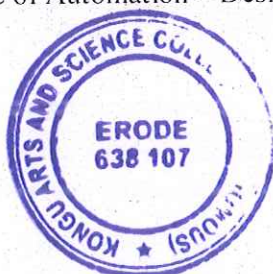
UNIT-I: Software Development Life Cycle models: Phases of Software project – Quality, Quality Assurance, Quality control – Testing, Verification and Validation **White-Box Testing:** Static Testing – Structural Testing – Challenges in White-Box Testing.

UNIT-II: Black-Box Testing: What is Black-Box Testing? - Why Black-Box Testing? – When to do Black-Box Testing? – How to do Black-Box Testing? **Integration Testing:** Integration Testing as Type of Testing – Integration Testing as a Phase of Testing – Scenario Testing – Defect Bash.

UNIT-III: System and Acceptance Testing: system Testing Overview – Why System testing is done? – Functional versus Non-functional Testing - Functional testing - Non-functional Testing – Acceptance Testing – Summary of Testing Phases.

UNIT-IV: Performance Testing: Factors governing Performance Testing – Methodology of Performance Testing – tools for Performance Testing – Process for Performance Testing – Challenges. **Regression Testing:** What is Regression Testing? – Types of Regression Testing – When to do Regression Testing – How to do Regression Testing – Best Practices in Regression Testing.

UNIT-V: Test Planning, Management, Execution and Reporting: Test Planning – Test Management – Test Process – Test Reporting. **Software Test Automation** – What is Test Automation? – Terms used in Automation – Skills Needed for Automation – What to Automate, Scope of Automation – Design and Architecture for Automation – Genetic Requirement for test



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