

Software testing

Semester VI	Subject Code: BC61704	Lectures: 60
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Objectives:

- The syllabus aims in equipping students with,
- To know the concept of software testing
 - To understand how to test bugs in software

Unit 1: Software Testing	16
<ul style="list-style-type: none"> • Introduction, Nature of errors, Testing principles , Debugging • Verification and validation • Static testing and dynamic testing • Software quality assurance • Software development life cycle • Different life cycle model: Waterfall model, Agile model, V model 	

Unit 2: Approaches to Testing	10
<ul style="list-style-type: none"> • White Box Testing: • Black Box Testing • Gray Box Testing • Unit Testing • Integration testing- Top-down ,Bottom up , Big Bang ,Sandwich 	

Unit 3: Testing for Specialized Environments	06
<ul style="list-style-type: none"> • Testing GUI's • Testing of Client/Server Architectures • Testing Documentation and Help Facilities • Testing for Real-Time Systems • Case Study: How to test web, stand alone and database applications – with examples 	



Unit 4: Software Testing types and test case design	08
<ul style="list-style-type: none">• Performance Testing: Stress, load testing• Regression Testing• Agile testing• Acceptance testing• Smoke Testing• Test case design: Case study : how to write test case for applications	

Unit 5: Introduction to Automation testing	08
<ul style="list-style-type: none">• Basics of automation testing – why, when and how to perform automation testing• Introduction to testing tools(Winnrunner, Loadrunner, QTP,Selenium)• Factors for choosing a particular tool• An overview for the major functional testing tools• Overview of Test management and bug tracking tools• Test Automation tool (Activity on Winrunner Testing tool)	

***Contact hours – 12 hours**

Recommended Text Book:

- ✓ 1. *Software testing*, Dr Aruna Deoskar , Jyoti Malhotra, Vikas Tayade, Nirali Publication 2015

Reference Books:

1. Roger S. Pressman, *Software Engineering – A Practitioners Approach* ,Tata McGraw Hill
2. Douglas Bell, *Software Engineering for Students- A Programming Approach*, Pearson Education

