

Software testing

Semester VI	Subject Code: BC61704	Lectures: 60
-------------	-----------------------	--------------

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

- 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

- 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

- 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

