



**Course Title:** Software Testing  
**Course Code:** CC-307  
**Course Credit:** 3  
**Session Per Week:** 4  
**Total Teaching Hours:** 40 Hours

#### AIM

To develop the skill about what is testing, types of Testing Methods, Levels of Testing and its Management

To make the students able to test the existing systems.

#### LEARNING OUTCOMES

On the completion of the course students will:

- 1.To understand the basic terminologies and types of testing
- 2.Understand different testing methods
- 3.Understand the testing process
- 4.Manage the tests, plan testing process and create reports.

#### DETAIL SYLLABUS

##### Unit-1

**10 hours**

##### INTRODUCTION

- Definition of Software Testing and its Role
- Terms:- Failure, Error, Fault, Defect, Bug
- Goals of Testing
- Principles of Testing
- Software Testing Life Cycle
- Verification and Validation :- V-testing Life cycle
- Static and Dynamic Testing

##### Unit-2

**10 hours**

##### TYPES OF TESTING

- Black Box Testing
- Overview: What is & When?
- Techniques
  - Boundary Value Analysis
  - Equivalence class testing
  - Decision Table
- White Box Testing
- What is white box Testing
- Need of white box Testing
- Classification
- Structural : Coverage, Path
- Static : Inspection, Walkthrough , Technical Review

**Unit-3****10 hours****LEVELS OF TESTING**

- Unit Testing : Overview
- Integration Testing : Overview
- Techniques: Graph based & Path based
- Functional Testing
- System Testing :Overview
- Categories: Reliability Security Performance Recovery
- Acceptance Testing : Overview, Types of Acceptance Testing

**Unit-4****10 hours****TEST MANAGEMENT****Test Planning:**

- Preparing a Test plan, Scope management, Decide Test Approach, Setting Up Criteria for testing, Identifying responsibilities, Staffing, training needs, Resource requirements, Test deliverables, Testing Tasks

**Test Management:**

- Choice of standards, Test infrastructure management, Test people management, Integrating with product release
- Test Process: Base line a test plan, Test case specification, Update of traceability
- Test reporting: Recommending product release

**TEXT BOOK/S:**

UNIT 1,2,3 :-Software Testing: Principles and Practice by Srinivasan Desikan, Gopalaswamy Ramesh,Pearson

UNIT -4 :-Software Testing: Principles and Practice by Naresh Chauhan, Oxford

**REFERENCE BOOKS:**

Software Testing: Easy Learning Approach by Shubha Agarwal Kundlas"

**WEB RESOURCES:**

"<http://www.softwaretestingsoftware.com>

[https://www.guru99.com › software-testing-introduction-importance](https://www.guru99.com/software-testing-introduction-importance)

**REQUIRED SOFTWARE/S**