

Siruseri IT park, OMR, Chennai - 603103

LESSON PLAN							
Department of INFORMATION TECHNOLOGY							
Name of the Subject		SOFTWARE TESTING	f the handling Faculty		A.Asrin Mahmootha		
Subject Code		IT8076	Year / Sem		III/VI		
Acad Year		2021-2022	Batch		2019-2023		
Course Objective							
• To learn the criteria for test cases.							
• To learn the design of test cases.							
• To understand test management and test automation techniques							
• To apply test metrics and measurements.f data.							
Course Outcome							
CO1. Identify test cases suitable for a software development for different domains.							
CO2. Determine suitable tests cases to be carried out.							
CO3. Implment the test plann based on the document							
CO4. Verify test plans and test cases designed.							
CO5.Develop and validate a test plan.							
Sl. No.		T / R* Book	Periods Required	Mode of Teaching (BB / PPT / NPTEL /	Blooms Level (L1- L6)	CO	PO
UNIT-I							
1	Testing as an Engineering Activity,Process	T1	1	BB	L1	CO1	PO1-PO2
2	Testing Maturity Model	T1	1	BB	L1	CO1	PO1-PO2
3	Testing axioms,Basic Definitions, Software Testing Principles	T1	1	BB	L1	CO1	PO1
4	The Tester's Role in a Software Development Organization	T1	1	BB	L2	CO1	PO2
5	Software Testing Principles	T1	1	BB	L2	CO1	PO2
6	The Defect Repository and Test Design	T1	1	PPT	L2	CO1	PO2
7	Origins of Defects,Cost of defects	T1	1	PPT	L1	CO1	PO2
8	Defect Examples	T1	1	PPT	L3	CO1	PO2
9	Developer/Tester Support of Developing a Defect Repository	T1	1	PPT	L3	CO1	PO1-PO3
Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any							
UNIT II TEST CASE DESIGN STRATEGIES							
10	Test case Design Strategies	T1	1	BB	L1	CO2	PO1
11	Using Black Box Approach to Test Case Design	T1	1	BB	L1	CO2	PO1-PO3
12	Boundary Value Analysis,Equivalence Class Partitioning	T1	1	BB	L1	CO2	PO1-PO3
13	State based Testing,Cause Effect Graphing	T1	1	BB	L2	CO2	PO2
14	Cmppatibility,Documentation,Domain,Random Testing	T1	1	BB	L2	CO2	PO2
15	Using White Box Approach to Test design	W2	1	PPT	L2	CO2	PO2
16	Coverage and Control Flow Graphs	W2	1	PPT	L3	CO2	PO2
17	code functional testing,Evaluating Test Adequacy Criteria.	T1	1	PPT	L3	CO2	PO2
18	Evaluating Test Adequacy Criteria.	T1	1	PPT	L3	CO2	PO1-PO3
Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any							
Evaluation method							
UNIT III LEVELS OF TESTING							
19	The need for Levels of Testing	T1	1	BB	L1	CO3	PO1
20	Unit Test Planning And Designing the Unit Tests	T1	1	BB	L3	CO3	PO1
21	Running the Unit tests and Recording results	T1	1	BB	L2	CO3	PO2-PO3
22	Integration tests,Defect bash elimination System Testing	T1	1	BB	L2	CO3	PO2
23	Scenario testing	T1	1	BB	L2	CO3	PO2
24	Acceptance testing,Performance testing	T1	1	PPT	L2	CO3	PO2
25	Ad-hoc testing,Alpha, Beta Tests, Testing OO systems	W1	1	PPT	L2	CO3	PO3
26	Usability and Accessibility testing,Testing the documentation	W2	1	PPT	L2	CO3	PO3
27	Testing the Documentation and Website Testing	W1	1	BB	L1	CO3	PO3
Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any							
UNIT IV TEST MANAGEMENT							
28	People and organizational issues in testing	T1	1	BB	L1	CO4	PO1
29	Organization structures for testing teams	T1	1	BB	L2	CO4	PO1
30	Testing services And Test Planning	T1	1	BB	L2	CO4	PO1
31	Locating Test Items	T1	1	BB	L2	CO4	PO2
32	Test management And test process	T1	1	BB	L2	CO4	PO2
33	Reporting Test Results And Introducing the test specialist	T1	1	BB	L3	CO4	PO2
34	Skills needed by a test specialist	T1	1	PPT	L3	CO4	PO2
35	Building a Testing Group	W2	1	PPT	L2	CO4	PO2
36	The Structure of Testing Group and The Technical Training Program.	W2	1	PPT	L2	CO4	PO1-PO3
Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any							
Evaluation method							
UNIT V TEST AUTOMATION							
37	Software test automation	T1	1	BB	L1	CO5	PO1-PO3
38	Skills needed for automation	T1	1	BB	L2	CO5	PO1-PO3
39	Scope of automation	T1	1	BB	L2	CO5	PO1
40	Challenges in automation	T1	1	BB	L2	CO5	PO2
41	Test metrics and measurements	T1	1	PPT	L1	CO5	PO2
42	Challenges in progress	T1	1	PPT	L2	CO5	PO2
43	Requirement for a test tool	W2	1	BB	L3	CO5	PO2
44	Design and architecture for automation	W2	1	BB	L3	CO5	PO1-PO3
45	Progress and productivity metrics	W2	1	BB	L3	CO5	PO2
Suggested Activity: Assignment / Case Studies / Tuorials/ Quiz / Mini Projects / Model Developed/others Planned if any							
Evaluation method							
Content Beyond the Syllabus Planned							
1							
2							
Text Books							
1	1. Srinivasan Desikan and Gopalaswamy Ramesh, —Software Testing – Principles and PracticesII, Pearson Education, 2006. University Press, 2012.						
2	2. Ron Patton, —Software TestingII, Second Edition, Sams Publishing, Pearson Education, 2007. Tools, Techniques, NoSQL, and Graph", Morgan Kaufmann/El						
3							

Reference Books												
1	1. Ilene Burnstein, —Practical Software TestingII, Springer International Edition, 2003.											
2	2. Edward Kit,II Software Testing in the Real World – Improving the ProcessII, Pearson Education, 1995											
3	3. Boris Beizer,II Software Testing TechniquesII – 2nd Edition, Van Nostrand Reinhold, New York, 1990											
Website / URL References												
1	W1: http://nptel.ac.in/											
2	W2: https://www2.cs.siu.edu/~mengxia/Courses%20PPT/435/Chapter_03.pdf											
3	W3: http://www.cs.tau.ac.il/~nachumd/models/Nets.pdf											
Blooms Level												
Level 1 (L1) : Remembering				Higher Order Thinking	Level 4 (L4) : Analysing				Projects / Mini Projects			
Level 2 (L2) : Understanding					Level 5 (L5) : Evaluating							
Level 3 (L3) : Applying					Level 6 (L6) : Creating							
Mapping syllabus with Bloom's Taxonomy LOT and HOT												
Unit No	Unit Name					L1	L3	L4	L5	L6	HOT	Total
Unit 1	INTRODUCTION					4	2	0	0	0	0	9
Unit 2	TEST CASE DESIGN STRATEGIES					3	3	0	0	0	0	9
Unit 3	LEVELS OF TESTING					2	1	0	0	0	0	9
Unit 4	TEST MANAGEMENT					1	2	0	0	0	0	9
Unit 5	TEST AUTOMATION					2	3	0	0	0	0	9
Total						12	11	0	0	0	0	45
Total Percentage						26.66667	24.44444	0	0	0	0	100
CO PO Mapping												
	PO1	PO2	PO3	PO4	PO5	PO6	PO8	PO9	PO10	PO11	PSO1	PSO2
CO1	3	2	1	0	0	0	0	0	0	0	3	2
CO2	3	2	1	0	0	0	0	0	0	0	3	2
CO3	3	2	1	0	0	0	0	0	0	0	3	2
CO4	3	2	1	0	0	0	0	0	0	0	3	2
CO5	3	2	1	0	0	0	0	0	0	0	3	2
Avg	3		1	0	0	0	0	0	0	0	3	2
2												
CO1	Identify test cases suitable for a software development for different domains.											
CO2	Determine suitable tests cases to be carried out.											
CO3	Implment the test plann based on the document											
CO4	Verify test plans and test cases designed.											
CO5	Develop and validate a test plan.											
3	High level				2	Moderate level				1	Low level	
Name & Sign of Subject Expert :												
Head of the Department :iT												