

Maharashtra State Board of Technical Education, Mumbai

Laboratory Plan (LP-PR)/ Course Information Sheet (CIS)

K-2

Academic Year: 2025-26

Date: 13/12/2025

Institute Name: K. K. Wagh Polytechnic, Nashik

MSBTE Code: 0078

Program and Code: Computer Technology (CM)

Course Code & Abbr.: 316314(SFT)

Course Name: Software Testing (SFT)

Name of Faculty: Mr. G. R. Shinde

Class: TYCM-Win **Semester:** 6th **Scheme:** K

Course Index: CI603 Learning **Hrs:** 30

● Teaching-Learning & Assessment Scheme:

Title	Course Code / Abbr	Course Category	Learning Scheme					Credits	TH Paper Duration (Hrs.)	Assessment Scheme										
			Actual Contact Hrs/Week			SLH	NLH			Theory				Based on LL & TSL Practical				Based on SL		Total Marks
			CL	TL	LL					FA T H	SA T H	Total	FA-PR		SA-PR		SLA			
													Max	Min	Max	Min	Max	Min		
Software Testing	316314/ SFT	DSC	3	-	4	1	8	4	3	30	70	100	40	25	10	-	-	25	10	150

Abbreviations: CL- Class Room Learning, TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, IKS – Indian Knowledge System, SLA - Self Learning Assessment

Legends: @ Internal Assessment, # External Assessment, *# On Line Examination, @\$ Internal Online Examination

● Course Outcomes (COs): Theory & Practical

By learning course Software Testing (SFT-316314), the Third Year students will be able to:

CO No.	Course Outcomes (COs) / Unit Outcomes (UOs)
CO603.1(CO1)	Explain various software testing methods.
CO603.2(CO2)	Prepare test cases for different levels of testing.
CO603.3(CO3)	Prepare test plan for a given application.
CO603.4(CO4)	Create defect report for a given application.
CO603.5(CO5)	Apply automation-testing tools to test software.

● COs, Practical Laboratory Learning Outcome (LLOs) and Mapping:

Pr. No	COs	LLO	Practical -Laboratory Learning Outcome (LLO)
PR 1	CO603.1 (CO1)	LLO 1.1	Write test cases for purchase management system.
PR 2	CO603.1 (CO1)	LLO 2.1	Write test cases for Inventory management System.
PR 3	CO603.1 (CO1)	LLO 3.1	Write test cases for simple calculator application.
PR 5	CO603.1 (CO1)	LLO 5.1	Write test cases for different tasks in any software module using equivalence partitioning and boundary value analysis of black box testing.
PR 6	CO603.2 (CO2)	LLO 6.1	Write test cases for railway reservation System.
PR 7	CO603.2 (CO2)	LLO 7.1	Prepare test cases for e-commerce login form.
PR 8	CO603.2 (CO2)	LLO 8.1	Write test cases for web page testing any web site
PR 9	CO603.2 (CO2)	LLO 9.1	Write program and design test cases for- For...Loop.
		LLO 9.2	Write program and design test cases for- Do...While Loop.
		LLO 9.3	Write program and design test cases for- Switch Case.
		LLO 9.4	Write program and design test cases for- if...else.
PR 10	CO603.2 (CO2)	LLO 10.1	Prepare test cases for online mobile recharge.
PR 11	CO603.2 (CO2)	LLO 11.1	Prepare test cases for flight ticket booking system.
PR 13	CO603.3 (CO3)	LLO 13.1	Write test plan and test cases for Notepad Application.

PR 14	CO603.3 (CO3)	LLO 14.1	Create test report of executed test cases for any website.
PR 15	CO603.3 (CO3)	LLO 15.1	Prepare test cases and test summary report for a travel booking application.
PR 16	CO603.3 (CO3)	LLO 16.1	Write test plan and test cases for the login functionality of a social media application.
PR 17	CO604.3 (CO4)	LLO 17.1	Prepare defect report after executing test cases for library management system.
PR 18	CO604.3 (CO4)	LLO 18.1	Prepare defect report after executing test cases for withdrawn of amount from ATM Machine.
PR 20	CO604.3 (CO4)	LLO 20.1	Prepare defect report after executing test cases for hostel admission form.
PR 21	CO304.4 (CO4)	LLO 21.1	Install and configure Selenium IDE to apply automation-testing concepts.
PR 22	CO304.4 (CO4)	LLO 22.1	Write and run test cases for Notepad using Selenium IDE.
PR 24	CO304.4 (CO4)	LLO 24.1	Install and configure Selenium WebDriver to apply automation-testing concepts.
PR 25	CO304.5 (CO5)	LLO 25.1	Apply browser automation techniques using Selenium WebDriver to automate tasks such as opening a URL, navigating, and closing.

• **Practical/Laboratory Plan:**

Sr. No	COs and LLOs	Practical Titles	Planned Dates		Remark & Faculty Sign with Assessment Date
			From	To	
1	CO1 LLO 1.1	*Design test cases for purchase order management based on system specification	A-15/12/2025 B-16/12/2025 C-17/12/2025	A-18/12/2025 B-19/12/2025 C-20/12/2025	
2	CO1 LLO 2.1	*Design test cases for Inventory management System based on System Specification	A-18/12/2025 B-19/12/2025 C-20/12/2025	A-29/12/2025 B-26/12/2025 C-27/12/2025	
3	LLO 3.1	Design test cases for calculator to verify its functionality (Black Box Testing)	A-29/12/2025 B-26/12/2025 C-27/12/2025	A-29/12/2025 B-26/12/2025 C-27/12/2025	
4	CO1 LLO 5.1	*Design test cases for different tasks (OTP Verification, Image Upload) in any software module using black box testing	A-01/01/2026 B-02/01/2026 C-03/01/2026	A-01/01/2026 B-02/01/2026 C-03/01/2026	
5	CO2 LLO 6.1	Test various functionality of railway reservation system	A-01/01/2026 B-02/01/2026 C-03/01/2026	A-05/01/2026 B-06/01/2026 C-07/01/2026	
6	CO2 LLO 7.1	*Validate login procedure for E-Commerce Application (Flipkart or Amazon)	A-05/01/2026 B-06/01/2026 C-07/01/2026	A-08/01/2026 B-09/01/2026 C-10/01/2026	
7	CO2 LLO 8.1	Test functionality of Web Pages of any website	A-08/01/2026 B-09/01/2026 C-10/01/2026	A-12/01/2026 B-13/01/2026 C-15/01/2026	
8	CO2 LLO 9.1 LLO 9.2 LLO 9.3 LLO 9.4	*Design Test Cases for Control and Decision Making Statements (Use C Language)	A-12/01/2026 B-13/01/2026 C-15/01/2026	A-15/01/2026 B-16/01/2026 C-17/01/2026	
9	CO2 LLO10.1	*Design test cases for online mobile recharge	A-19/01/2026 B-20/01/2026 C-21/01/2026	A-22/01/2026 B-23/01/2026 C-24/01/2026	
10	CO2 LLO11.1	*Design test cases for flight ticket booking system	A-22/01/2026 B-23/01/2026	A-29/01/2026 B-30/01/2026	

			C-24/01/2026	C-31/01/2026	
11	CO3 LLO13.1	*Design test plan and test cases for Notepad (MS Window based) Application	A-02/02/2026 B-03/02/2026 C-04/02/2026	A-05/02/2026 B-06/02/2026 C-07/02/2026	
12	CO3 LLO14.1	Prepare test report for any website	A-05/02/2026 B-06/02/2026 C-07/02/2026	A-09/02/2026 B-10/02/2026 C-11/02/2026	
13	CO3 LLO15.1	*Design test cases and test summary report for a travel booking application	A-09/02/2026 B-10/02/2026 C-11/02/2026	A-12/02/2026 B-12/02/2026 C-14/02/2026	
14	CO3 LLO16.1	*Design test plan and test cases for the login functionality of a social media application	A-12/02/2026 B-12/02/2026 C-14/02/2026	A-16/02/2026 B-17/02/2026 C-18/02/2026	
15	CO4 LLO17.1	*Generate Defect Report for Library Management System	A-16/02/2026 B-17/02/2026 C-18/02/2026	A-20/02/2026 B-21/02/2026 C-21/02/2026	
16	CO4 LLO18.1	*Validate Defect Report for ATM Machine	A-20/02/2026 B-21/02/2026 C-21/02/2026	A-23/02/2026 B-24/02/2026 C-25/02/2026	
17	CO4 LLO20.1	Defect Report for Hostel Admission Form	A-23/02/2026 B-24/02/2026 C-25/02/2026	A-05/03/2026 B-06/03/2026 C-07/03/2026	
18	CO5 LLO21.1	*Installation and Configuration of Selenium IDE.	A-09/03/2026 B-10/03/2026 C-11/03/2026	A-12/03/2026 B-13/03/2026 C-14/03/2026	
19	CO5 LLO22.1	*Test Case Design and Execution for Notepad (Windows-Based) Using Selenium IDE	A-12/03/2026 B-13/03/2026 C-14/03/2026	A-16/03/2026 B-17/03/2026 C-18/03/2026	
20	CO5 LLO24.1	*Installation and Configuration of Selenium WebDriver	A-16/03/2026 B-17/03/2026 C-18/03/2026	A-23/03/2026 B-24/03/2026 C-25/03/2026	
21	CO5 LLO25.1	*Browser Automation with WebDriver	A-23/03/2026 B-24/03/2026 C-25/03/2026	A-30/03/2026 B-27/03/2026 C-28/03/2026	
22	BS*	Installation and Configuration of _____ IDE.	A-30/03/2026 B-27/03/2026 C-28/03/2026	A-02/04/2026 B-27/03/2026 C-01/04/2026	

Note: -Out of above suggestive LLOs -'* Marked Practicals (LLOs) Are mandatory.

-Minimum 80% of lab experiment are to be performed.

-Judicial mix of LLOs are to be performed to achieve desired outcomes.

● **Formative & Summative Assessment Criteria:**

● **Theory Assessment:**

a) **Formative assessment (TH-FA):**

- Two offline class tests each of 30 marks will be conducted as per MSBTE guidelines. The average of two class test marks will be considering for final TH-FA(Average) out of 30 marks.

b) **Summative Assessment (TH- SA):**

- The comprehensive End semester assessment will be done by MSBTE by a Theory written Examination for 70 marks. Question Paper setting and the Answer book Assessment is performed by MSBTE.
- Final Theory Score out of 100 Marks will be derived as the total score as below:
 - SA-TH [out of 70] + FA-TH[Average out of 30] = 100 Marks

● **Practical Assessment:**

- Formative Assessment (FA) of each practical/experiment will be performed progressively for 25 marks. The assessment will be performed based on the Regularity in Practical Performance, Tool Selection Ability, Use of Appropriate tool to perform the Identified tasks, Algorithm/Solution developed, Quality of output achieved, Answer to sample questions and Submit report in total time.
- Final Term Work (FA-PR) of 25 marks is calculated based on scores in Formative Assessment for all practicals/experiments as:

- **Term Work Marks (FA-PR)** = ((Sum of Total Marks Scored in FA x 25) / (Total Number of Experiments)) x (25))

● Self Learning Assessment:

Self-learning Activities (SLA) includes Micro project / Software Testing course NPTEL Platform/ Software Testing Fundamentals course Infosys Springboard / Assignment / other activities related to course and it will be evaluated out of 25 Marks.

● References:

1. Suggested Books for Reference:

Sr. No	Author	Title of the Book	Publisher
1.	Srinivasan D, Gopalaswamy R	Software Testing: Principles and Practices	Pearson India, 2016, ISBN: 9788177581218
2.	Limaye M. G.	Software Testing: Principles, Techniques and Tools	Tata McGraw Hill Education, New Delhi, 2012, ISBN(13): 9780070139909
3.	Chauhan Naresh	Software Testing: Principles and Practices	Oxford University Press, 2016, ISSN: 9780198061847
4.	Kalilur Rahman	Science of Selenium Master Web UI Automation and Create Your Own Test Automation Framework	Bpb Publications, 2019, ISBN: 9789389423242, 9389423244
5.	Singh Yogesh	Software Testing	Cambridge University Press, 2012, ISBN 978-1-107-65278-1

2. Learning Websites URLs & Portals:

Sr. No	Website /Portal Link/URL	Description
1	https://infyspringboard.onwingspan.com/web/en/app/toc/lex_auth_0138417928613150724254_shared/overview	Infosys Springboard - Software Testing Fundamentals course
2	https://www.geeksforgeeks.org/software-testing-basics/	Software Testing Tutorials
3	https://www.w3schools.in/software-testing/tutorials/	Software Testing Tutorials
4	https://www.geeksforgeeks.org/defect-management-process/	Software Testing – Defect Management Process
5	https://www.lambdatest.com/learning-hub/selenium-ide	Introduction to Selenium IDE
6	https://www.geeksforgeeks.org/introduction-to-selenium-webdriver/	Introduction to Selenium WebDriver
7	https://www.geeksforgeeks.org/software-measurement-and-metrics/	Software Testing – Software Measurement and metrics
8	https://nptel.ac.in/courses/106101163	Software Testing Course

3. URLs of referred YouTube Videos:

Sr. No	URL/YouTube Link	Topic/ Description
1	https://www.youtube.com/watch?v=zxnaG2iBve	Software Testing, Objectives of Testing, Software
2	https://www.youtube.com/watch?v=FMUm5z7	Failure, Error, Fault, Defect, Bug Terminology
3	https://www.youtube.com/watch?v=T0TynxN77	Methods of Testing: Static and Dynamic Testing
4	https://www.youtube.com/watch?v=IOrAlTY639	White Box Testing

5	https://www.youtube.com/watch?v=0FBAAeyasy	Black Box Testing
6	https://www.youtube.com/watch?v=T0TynxN77	Types and Levels of Testing
7	https://www.youtube.com/watch?v=cPAwsDxW	Test life cycle
8	https://www.youtube.com/watch?v=-	Software Testing 'V' Model Tools

• **Laboratory Equipment / Instruments / Tools / Software /Materials Required**

Sr. No	Equipment Name with Broad Specifications	Relevant LLO Number
1	Selenium (IDE and WebDriver)	21,22,23,24,25,26
2	Computer System with processor i3 and above, RAM minimum 4 GB	All
3	Spreadsheet Package (Microsoft excel)	All
4	Lean software testing tool, Bugzilla, QTP and RTP Software Testing Tool, loadrunner Software Testing Tool, GTMetrix, Notepad (Any Open Source Software Testing Tool)	All

• **Tools to Use for Practical Teaching-Learning, Assessment and Evaluation:**

1. **Thonny/ Anaconda/ PyCharm IDE** -used as software development tools for writing programs in the Python language.
2. **Google Classroom** –is used to share the notes, assignments with students.
3. **ERP-** is used to store the study materials like ppt, pdf files of notes.
4. **MKCL LMS ERA** – is used to share the topic wise subject material, assignments, video reference with students and also used to conduct unit wise quizzes, Test.

Mr. G. R. Shinde
(Faculty Name & signature)

Prof. M. P. Bhosale
(HOD-Computer Tech. Dept.)

CC-

1. Lab File
2. SFS – 316314 Course File
3. Notice Board / ERP
4. Institute Website / CIAAN Coordinator
5. Progressive Assessment