



THIRD-YEAR DIPLOMA IT ENGINEERING SYLLABUS

Semester: 6TH

Course Code: 002205672

Type of Course: PEC-LC-3

Course Name: Software Testing-Lab

Course Prerequisites:

Software testing is an indispensable process in the software development life cycle, serving as a critical quality assurance measure. Its primary objective is to identify and rectify defects, ensuring that the software meets specified requirements and functions as intended.

COURSE OBJECTIVE(S):

Software testing is to use testing techniques and test automation tools so as to ensure delivery of quality software.

TEACHING & EXAMINATION SCHEME:

Teaching Scheme (Hrs/Week)				Examination Scheme				
Theory	Tutorial	Practical	Credit	SEE		CA		
				Th	Pr	MSE	PLE	LA
0	0	2	1	00	25	00	00	25
				Total				
				50				

Th: Theory; Pr: Practical; FA: Final Assessment; CAT: Continuous Assessment Theory; CAP: Continuous Assessment Practical;

TOTAL Practical Hours: No. of Practical Hrs/Week*15 = 30

LIST OF PRACTICALS: (sample for 2 hrs/week)*15 weeks

Sr. No.	Content	Unit No.	Time Duration
1	A). Create a glossary of at least five software testing terminologies with explanations. B). Describe why both SDLC and STLC are essential in the software development process.	1	3
2	Enlist and present at least three popular testing methodology (e.g., Agile, Waterfall) with its advantages and disadvantages.	1	2
3	Write program and design test cases for the following Control and decision-making statement. 1) For... Loop 2) Switch...case 3) Do... While 4) If...else	2	2
4	Design test cases for different tasks (OTP Verification, Image upload, Age verification in Registration) in any software modules using Equivalence partitioning, boundary value analysis, and decision table testing techniques of Black Box Testing.	2	3
5	A) Identify system specification & design test cases for Sales Invoice	2	4



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	Management. B) Design Test Cases for Flight Ticket Booking system.		
6	Develop test scenarios and test cases for the login functionality of a social media application.	3	2
7	Develop an RTM and measure testing metrics for any two dynamic web pages of an e-commerce website.	3	2
8	Execute test cases for a travel booking app and prepare a test summary report.	3	2
9	Prepare defect report after executing test cases for registration page.	4	2
10	Prepare defect report after executing test cases for Withdrawn of amount from ATM Machine.	4	2
11	A) Install and set up the Selenium WebDriver and necessary drivers(e.g., ChromeDriver, GeckoDriver) on your system. B) Install JUnit, TestNG using an IDE (Integrated Development Environment) like Eclipse or IntelliJ.	5	2
12	Design and run test script for a registration page using Selenium tool and JUnit.	5	2
13	Design and run test script for a Login page and home page using Selenium tool and TestNG.	5	2
		TOTAL	30

Text Book(s):

Title of the Book	Author(s)	Publication
Software Engineering		ATUL PRAKASHAN

Reference Book(s):

Title of the Book	Author(s)	Publication
Software Engineering: A Practitioner's Approach	Roger S. Pressman	Tata McGraw Hill, New Delhi
Fundamentals of Software Engineering	Rajib Mall	PHI Learning Private Limited, New Delhi
Object Oriented Modeling and design with UML	Michael R Blaha and James R Rumbaugh	Pearson Prentice Hall, 2009

Web Material Link(s):

1. https://onlinecourses.nptel.ac.in/noc18_cs42/



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2. <https://www.guru99.com/software-testing.html>
3. <http://www.softwaretestinghelp.com>
4. Tools QA
5. Software Testing in Continuous Delivery | Atlassian
6. The Complete 2023 Software Testing Bootcamp | Udemy
7. Software Testing - Testing Tutorials, Testing Tools, Testing Softwares, Testing Jobs, Testing Techniques (onestoptesting.com)

Equivalent/Corresponding Course on NPTEL (SWAYAM):

NPTEL course on

<https://nptel.ac.in/courses/106101163>

PRACTICAL EVALUATION:

Sr. No.	Activity	Marks	Weightage
1	Semester End Examination (External Practical)	30	60%
2	Continuous Assessment Practical (CAP)	20	40%
	Semester End Examination (External Practical)		
1(a)	Lab Experiment/Exercise		30%
1(b)	Viva-voce		20%
1(c)	Certified Record		10%
	Continuous Assessment Practical (CAP)		
2(a)	Day to day Laboratory Work & Attendance		15%
2(b)	Submission of Laboratory Work/Journal		10%
2(c)	Exam		15%

* For 4 Credit Subjects

1 Credit = 25 Marks

Theory: 3 Credits = 75 Marks

Practicals: 1 Credit = 25 Marks

SEE Evaluation will be of 100 marks and converted to 50 Marks (75 Th + 25 Pr)

CA Evaluation will be of 100 Marks and converted to 50 Marks. (75 Th + 25 Pr)

Distribution of Marks for Theory Evaluation as per Bloom's Taxonomy Level:

Level	Remember	Understand	Apply	Analyse	Evaluate	Create
% Weightage	10%	20%	30%	20%	20%	10%

COURSE OUTCOMES:

CO1	Describe importance of Software Testing to enhance the quality of software products.
CO2	Apply black-box and white-box testing techniques effectively.



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CO3	Develop effective test cases based on specifications, utilizing appropriate templates and methodologies.
CO4	Apply bug identification skills to create a comprehensive defect report for the software application
CO 5	Utilize popular testing tools (e.g., Selenium, JUnit, TestNG) for creating and executing automated test scripts.