



SWARNANDHRA

COLLEGE OF ENGINEERING & TECHNOLOGY (AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956, Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada Seetharampuram, W.G.DT., Narsapur-534280, (Andhra Pradesh)

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods /Week	Academic Year	Date of commencement of Semester
20CS6J02	Software Testing Tools	VI	AI&ML	4	2023-24	24-11-2023
Pre-requisites:						
COURSE OUTCOMES						
CO1	Learn Manual testing techniques and software test levels					
CO2	Practice Java Programme for Selenium and Test frame works					
CO3	Learn Apache JMeter and Building a JMeter Test Plan					
CO4	Running Multiple Scripts with JMeter and Different Types of JMeter Test Plans					
CO5	Practicing JIRA and Test Management In JIRA (Using Zephyr Plug-in)					
Unit	Out Comes / Bloom's Level	Topics No.	Topics/Activity	Text Book / Reference	Contact Hour	Delivery Method
UNIT-I: Manual Testing						
I	CO1: Learn Manual testing techniques and software test levels	1.1	Software Development Life Cycle	Web Reference - 1	1	Chalk ,talk
		1.2	Requirements Gathering, Analysis and Planning	Web Reference - 1	1	Chalk ,talk
		1.3	Software Design, Coding/Implementation	Web Reference – 1	2	Chalk ,talk
		1.4	Testing, and Release and Maintenance Phase	Web Reference – 1	1	Chalk ,talk
		1.5	Software Test Levels (Unit Testing, Integration Testing, System Testing, and Acceptance Testing)	Web Reference – 1	3	Chalk ,talk
		1.6	Software Test Types	Web Reference - 1	1	Chalk ,Talk
		1.7	Software Test Design Techniques	Web Reference - 1	1	Chalk, Talk
		1.8	Software Test Life Cycle	Web Reference - 1	1	Chalk, Talk
		1.9	Software Documents	Web Reference - 1	1	Chalk, Talk



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		1.10	Software Testing Standards	Web Reference - 1	1	
		1.11	Software Testing certification/s	Web Reference - 1	1	Chalk, Talk
Revision of Manual Testing					1	Chalk ,talk, ppt
Total					15	
UNIT-II: Selenium with Java						
II	CO2: Practice Java Programme for Selenium and Test frame works	2.1.1	Java Programme for Selenium - Introduction	Web Reference - 1	1	Chalk ,talk
		2.1.2	Data Types	Web Reference - 1	1	Chalk ,talk
		2.1.3	Variables, Operators	Web Reference - 1	1	Chalk ,talk
		2.1.4	Control Flow	Web Reference - 1	1	Chalk ,talk
		2.1.5	Strings, Arrays	Web Reference - 1	1	Chalk ,talk
		2.1.6	IO, Methods	Web Reference - 1	1	Chalk ,talk
		2.1.7	Exception Handling,	Web Reference - 1	1	Chalk ,talk
		2.1.8	Object-Oriented Programming	Web Reference - 1	1	Chalk ,talk
		2.2.1	Web/HTML Elements, Inspecting Web Elements	Web Reference - 1	1	Chalk ,talk
		2.2.2	Locating Elements, Selenium WebDriver API commands	Web Reference - 1	1	Chalk ,talk
		2.2.3	Wait statements, and Page Object Model	Web Reference - 1	1	Chalk ,talk
		2.2.4	TestNG Testing Framework	Web Reference - 1	1	Chalk ,talk,ppt
		2.2.5	Create Test cases	Web Reference - 1	1	Chalk ,talk
		2.2.6	Prioritise Test cases, Grouping Test Cases, Batch Testing	Web Reference - 1	1	Chalk ,talk
		2.2.7	Generating Test Results	Web Reference - 1	1	Chalk ,talk
2.3	Automation Framework	Web Reference - 1	1			
Revision of Selenium with Java					1	Chalk ,talk, ppt
Total					17	
UNIT- III: JMeter						
III	CO3: Learn Apache JMeter and Building a JMeter Test Plan	3.1	Introduction to Apache JMeter	Web Reference – 2	2	Chaik ,talk,ppt
		3.2	Elements of JMeter Test Plan	Web Reference – 2	4	Chalk ,talk
		3.3	Building a JMeter Test Plan	Web Reference – 2	2	Chalk ,talk,ppt
		3.4	Recording Tests Using JMeter	Web Reference – 2	1	Chalk ,talk
		3.5	Enhancements in Test Scripts	Web Reference – 2	1	Chalk ,talk
Revision of JMeter					1	Chalk ,talk, ppt
Total					11	



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UNIT-IV: JMeter(contd..)						
IV	CO4: Running Multiple Scripts with JMeter and Different Types of JMeter Test Plans	4.1	JMeter Result Analysis	Web Reference – 2	1	Chalk ,talk
		4.2	Running Multiple Scripts with JMeter	Web Reference – 2	1	Chalk ,talk
		4.3	Different Types of JMeter Test Plans	Web Reference – 2	3	Chalk ,talk
		4.4	JMeter Distributed (Remote) Testing	Web Reference – 2	1	Chalk ,talk
		4.5	JMeter Functions, Variables and Regular Expressions	Web Reference – 2	3	Chalk ,talk
		4.6	JMeter Best Practices	Web Reference – 2	2	Chalk ,talk
		Revision of JMeter Best Practices				
Total					12	
UNIT-V: JIRA						
V	CO5 Practicing JIRA and Test Management In JIRA (Using Zephyr Plug-in) (K2 ,K3)	5.1	Introduction of JIRA	Web Reference – 3	1	Chalk ,talk,ppt
		5.2	Getting started with JIRA	Web Reference – 3	1	Chalk ,talk,ppt
		5.3	Test Management In JIRA (Using Zephyr Plug-in)	Web Reference – 3	2	Chalk ,talk,ppt
		5.4	Defect Management In JIRA	Web Reference – 3	2	Chalk ,talk,ppt
		5.5	Advanced Search Using JQL	Web Reference – 3	2	Chalk ,talk,ppt
		5.6	Generating Reports In JIRA	Web Reference – 3	2	Chalk ,talk,ppt
		Revision of JIRA				
Total					11	
CUMULATIVE PROPOSED PERIODS					66	
Web References						
1	https://www.lambdatest.com/blog/selenium-with-java/					
2	https://www.gcreddy.com/2021/09/apache-jmeter-syllabus.html					
3	https://www.javatpoint.com/jira-tutorial					
Activities planned for achievement of outcomes:						



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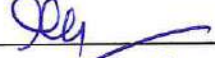
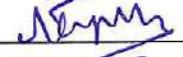

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Activities to be selected from following list (Partial list, more activities can be added by faculty)

1.	Assignments
2.	Quizzes
3.	Internal Assessment Tests
4.	Crossword
5.	Role Play
6.	Mini Project

Assignments:

A-1	SDLC, Software Test Levels, STLC
A-2	Exception Handling in Java, Selenium API commands, Testing Framework, Automation Framework
A-3	JMeter Test Plan Elements, Building JMeter test plan, Debugging Script
A-4	Running Multiple Scripts with JMeter, Different types of JMeter test plans
A-5	Test Management in JIRA, Advanced Search using JQL

	Name	Signature with Date
i. Faculty	V. Subrahmanyam	
ii. Course Coordinator	Dr. G.Sudhakar	
iii. Module Coordinator	K. Jai Prakash	
iv. Programme Coordinator	Dr. B. Rama Krishna	


Principal