St. Ann's College of Engineering &Technology: Chirala
Department of COMPUTER SCIENCE & ENGINEERING
LECTURE SCHEDULE

SUBJECT: Software Testing Methodologies **ACADEMIC YEAR: 2017-18**
NAME: G. PRASUNA **YEAR & SEM/SECTION: IV-I /B**
No. of Lectures per week : 4+1* (Tutorial)

S. NO	DATE	UNIT	TOPICS
1		UNIT I	Introduction on Software Testing Methodologies
2			Software Myths &Facts
3			Software Evolution
4			Myths & Facts, Goals
5			**Tutorial-Revision on Previous topics**
6			Psychology , Definition
7			Model for testing
8			Effective Vs Exhaustive Software Testing
9			Software Testing Terminology and Methodology
10			**Tutorial**
11			Software Testing Life Cycle
12			Software Testing Life Cycle
13			Software Testing Methodology
14			**Tutorial**
15			**UNIT-1 REVISION with PPT OR NPTEL VIDEOS**
16			**Unit – 1 Test**
17			OT-1, Verification & Validation Activities
18			Verification of Requirements
19			**Tutorial**
20			High level designs, Low level designs
21			How to verify code

22			Validation
23			Dynamic Testing I: Black Box testing techniques: Boundary Value Analysis
24		**UNIT II**	**Tutorial**
25			Equivalence class Testing
26			State Table based testing
27			Decision table based testing
28			Cause-Effect Graphing based testing
29			**Tutorial**
30			Cause-Effect Graphing based testing
31			Error guessing
32			**Unit-2 Test**
33		**UNIT III**	OT-2, Dynamic Testing II: White-Box Testing: need, logic coverage criteria
34			**Tutorial**
35			Basis path testing, Graph matrices
36			Loop testing, Data flow testing
37			Mutation testing, Static Testing: Inspections
38			Structured Walkthroughs, Technical reviews
39		**I MID**	**UNIT-2 REVISION with PPT OR NPTEL VIDEOS**
40			**UNIT-3 REVISION with PPT OR NPTEL VIDEOS**
41			**Revision**
42			**Revision**
43			**Revision**
44			Validation activities: Introduction,Unit testing
45			Integration Testing, Function testing
46			**Tutorial**

47			System testing,Acceptance testing
48			Regression testing:Progressives Vs regressive testing
49			Regression testability, Objectives of regression testing
50		**UNIT IV**	**Tutorial**
51			Regression testability, Objectives of regression testing
52			When regression testing done?,Regression testing types
53			Regression testing techniques
54			**UNIT-4 REVISION with PPT OR NPTEL VIDEOS**
55			**Tutorial**
56			**Unit IV Test**
57			OT-3,Efficient Test Suite Management: Test case deisgn
58			Why does a test suite grow, Minimizing the test suite and its benefits
59			test suite prioritization, Types of test case prioritization
60			**Tutorial**
61			prioritization techniques, measuring the effectiveness of a prioritized test suite
62			Software Quality Management: Software Quality metrics
63		**UNIT V**	SQA models
64			Debugging:process, techniques,correcting bugs
65			**Tutorial**
66			Basics of testing management tools,Test link and Jira
67			**UNIT-5 REVISION with PPT OR NPTEL VIDEOS**
68			**Unit-V test**
69			OT-4, Automation and Testing Tools: need for automation
70			categorization of testing tools, selection of testing tools,Cost incurred
71			Guidelines for automated testing, overview of some commercial testing tools

72		**UNIT VI**	**Tutorial**
73			Testing Object Oriented Software: basics, Object oriented testing
74			Testing Web based Systems: Challenges in testing for web based software
75			quality aspects, web engineering
76			Testing web based systems, Testing mobile systems
77		**II MID**	**UNIT-6 REVISION with PPT OR NPTEL VIDEOS**
78			**Revision**
79			**Revision**
80			**Revision**
81			**Revision**

Text Books:

1. Software Testing, Principles and Practices, Naresh Chauhan, Oxford
2. Foundations of Software testing, Aditya P Mathur, 2ed, Pearson
3. Software Testing- Yogesh Singh, CAMBRIDGE

Reference books:

1. Software testing techniques - Baris Beizer, International Thomson computer press, second edition.
2.Software Testing, Principles, techniques and Tools, M G Limaye, TMH
3. Effective Methods for Software testing, Willian E Perry, 3ed, Wiley

FACULTY MEMBER **HEAD OF THE DEPARTMENT**