

ST. ANN'S COLLEGE OF ENGINEERING & TECHNOLOGY: CHIRALA
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LESSON PLAN

SUBJECT: SOFTWARE TESTING METHODOLOGIES

Name: G. Prasuna

Year&Sem/Section: III –II

No. of Lectures per week : 4+1* (Tutorial)

Academic Year: 2019-20

Sl.No. /Unit	Topic	No of Classes Required
I	Introduction: Purpose of Testing, Dichotomies, Model for Testing, Consequences of Bugs, Taxonomy of Bugs. Flow graphs and Path testing: Basics Concepts of Path Testing, Predicates, Path Predicates and Achievable Paths, Path Sensitizing, Path Instrumentation, Application of Path Testing.	10
II	Transaction Flow Testing: Transaction Flows, Transaction Flow Testing Techniques. Dataflow testing: Basics of Dataflow Testing, Strategies in Dataflow Testing, Application of Dataflow Testing.	9
III	Domain Testing: Domains and Paths, Nice & Ugly Domains, Domain testing, Domains and Interfaces Testing, Domain and Interface Testing, Domains and Testability. Paths, Path products and Regular expressions: Path Products & Path Expression, Reduction Procedure, Applications, Regular Expressions & Flow Anomaly Detection.	8
IV	Syntax Testing: Why, What and How, A Grammar for formats, Test Case Generation, Implementation and Application and Testability Tips. Logic Based Testing: Overview, Decision Tables, Path Expressions, KV Charts, and Specifications.	8
V	State, State Graphs and Transition Testing: State Graphs, Good & Bad State Graphs, State Testing, and Testability Tips. Graph Matrices and Application:- Motivational overview, matrix of graph, relations, power of a matrix, node reduction algorithm.	7
VI	Software Testing Tools: Introduction to Testing, Automated Testing, Concepts of Test Automation, Introduction to list of tools like Win runner, Load Runner, Jmeter, About Win Runner ,Using Win runner, Mapping the GUI, Recording Test, Working with Test, Enhancing Test, Checkpoints, Test Script Language, Putting it all together, Running and Debugging Tests, Analyzing Results, Batch Tests, Rapid Test Script Wizard.	9
Total Classes Required		51

TEXT BOOKS:

1. Software testing techniques – Boris Beizer, Dreamtech, second edition.
2. Software Testing- Yogesh Singh, Camebridge

REFERENCES:

- 1.The Craft of software testing - Brian Marick, Pearson Education.
- 2.Software Testing, 3rd edition, P.C. Jorgensen, Aurbach Publications (Dist.by SPD).
- 3.Software Testing, N.Chauhan, Oxford University Press.
- 4.Introduction to Software Testing, P.Ammann&J.Offutt, Cambridge Univ.Press.
5. Effective methods of Software Testing, Perry, John Wiley, 2nd Edition, 1999.
- 6.Software Testing Concepts and Tools, P.NageswaraRao, dreamtech Press
7. Win Runner in simple steps by Hakeem Shittu, 2007Genixpress.
8. Foundations of Software Testing, D.Graham& Others, Cengage Learning.

FACULTY MEMBER

HEAD OF THE DEPARTMENT