Course: BTech **Semester:** 6

Prerequisite: Software Engineering Basics, Basics of Java Programming | 203105396 - Software Testing & Quality Assurance Laboratory

Rationale: To study pioneer of Software Development Life Cycle, Development models and Agile Software development. To study fundamental concepts in software testing, including software testing objectives, process, criteria, strategies, and methods. To discuss various software testing issues and solutions in software unit test; integration, regression, and system testing. To learn the process of improve the quality of software work products. To gain the techniques and skills on how to use modern software testing tools to support software testing projects. To expose Software Process Improvement and Reengineering

Teaching and Examination Scheme

Teaching Scheme					Examination Scheme					Total
Lecture Hrs/	Tutorial Hrs/	Lab Hrs/	Hrs/Week	Credit	Internal Marks			External Marks		
					T	CE	P	T	P	
0	0	2	-	1	-	-	20	-	30	50

SEE - Semester End Examination, **CIA** - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content

W - Weightage (%) , **T** - Teaching hours

Sr.	Topics	W	T
1	**1** Design test cases using Boundary value analysis		
2	**2** Design test cases using Equivalence class partitioning		
3	**3** Design independent paths by calculating cyclometic complexity using date problem		
4	**4** Design test cases using Decision table		
5	**5** Design independent paths by taking DD path using date problem		
6	**6** Understand The Automation Testing Approach (Theory Concept)		
7	**7** Using Selenium IDE, Write a test suite containing minimum 4 test cases		
8	**8** Install Selenium server and demonstrate it using a script in Java/PHP		
9	**9** Write and test a program to login a specific web page.		
10	**10** Write and test a program to provide total number of objects present / available on the page.		
11	**11** Write and test a program to update 10 student records into table into Excel file.		

Course Outcome

After Learning the Course the students shall be able to:
1. Prepare SRS (Software Requirement Specification) document and SPMP (Software ProjectManagement Plan) document. 2. Apply the concept of Functional Oriented and Object Oriented Approach for Software Design. 3. Recognize how to ensure the quality of software product, different quality standards and softwarereview techniques. 4. Apply various testing techniques and test plan in. 5. Able to understand modern Agile Development and Service Oriented Architecture Concept of Industry.