**Software Testing Syllabus**

for

2nd Year MCA,

Kristu Jayanti College,

Bengaluru

**Unit 1 – Introduction to Software Testing**

* What is Software Testing ?
* Types of Software Testing.
* Significance of Software Testing.
* Software Development Life Cycle (SDLC)
* Phases in software development life cycle
* Waterfall and Agile method of software development
* Scrum methodology of agile software development
* Software Testing Life Cycle (STLC)

**Unit 2 – Introduction to Software Testing Tools**

* Introduction to tools used in software testing
* Unit Testing tools/libraries – Junit/TestNG
* API Testing tool - Postman
* Test Automation Tool – Selenium
* Performance testing tool – Jmeter

**Unit 3 – Manual Testing, Test Management and Defect Tracking**

* Introduction to test plan, test case and test execution
* Writing manual test cases for unit testing, integration testing and system testing
* Execution of test cases
* Introduction to bug and bug life cycle
* Introduction to bug tracking tools such as Bugzilla
* Introduction to Jira a tool for project management and bug tracking
* Hands on assignment

**Unit 4 – API Testing**

* Introduction to API testing
* Downloading and installing Postman application
* Setting up postman to test API
* API testing using Post,Get,Put and Delete methods
* Hands on assignment

**Unit 5 – Version Control System**

* Introduction to Version Control System
* Download and install git
* Open an account in github.com
* Git commands to manage project source code
* Executing of git commands such as git init,git add,commit,status,push,clone, pull etc.
* Hands on assignment

**Unit 6 – Unit Testing using TestNG**

* Downloading and installing JDK and Eclipse
* Downloading TestNG from Eclipse Market place
* Writing sample java programs by creating project java project in eclipse
* Writing unit test cases using TestNG
* TestNG annotations
* Hands on assignment

**Unit 7 – Test Automation using selenium for java**

* Introduction to Selenium and its suite
* Selenium IDE and Web driver
* Creating maven project in eclipse and configuring dependencies in POM file
* Writing sample test cases by using selenium web driver and chrome browser
* Locators in Selenium
* Exploring different types of locators in selenium
* Writing sample test cases to understand various locators
* Writing test cases using TestNG and selenium
* Generating test report using TestNG
* Introduction to Page Object Model
* Introduction to Selenium Grid
* Hands on assignment

**Unit 8 – Performance testing using Apache Jmeter**

* Introduction to Apache Jmeter
* Downloading and installing Apache Jmeter
* Testing performance of sample websites
* Increasing the number of concurrent users to test the performance of the sample websites
* Downloading and saving report as CSV file
* Hands on assignment