TECNIA INSTITUTE OF ADVANCED STUDIES

Grade 'A' Institute

Department of Information, Communication & Technology

Master Of Computer Applications (MCA)

Scheme and Syllabus (w.e.f. Academic Session 2020-21 onwards)

Course Code: MCA- 120   **L T C**
Course Name: Software Testing   **3 1 4**

LEARNING OBJECTIVES:

ln this course, the learners will be able to develop expertise related to applying testing in an appropriate manner to any software under test. lt shall enable the learners to get acquainted to the industry perspective and practices towards testing of software. The course shall cover the following topics:

1. Core Software Testing Concepts.
2. Testing at the unit, module, subsystem and system levels
3. The testing process.
4. Manual and automated techniques for generating and validating test data.
5. Test-Driven Development.
6. Testing Best Practices.

PRE-REQUISITES:

1. Fundamentals of Software Engineering.
2. Basics syntax and semantics of programming languages.
3. Fundamentals of Discrete Math (Sets, Graphs, logic and Grammar)

COURSE OUTCOMES (COs):

After completion of this course, the learners will be able to:

CO#	Detailed Statement of the CO	BT Level	Mapping to PO #
CO1	ldentify the fundamentals of software testing and differentiate it from debugging.	BTL3	POL, PO2, PO3, PO6
CO2	Apply knowledge of prioritization, and technical and logical dependencies, to schedule test execution for a given set of test cases during development and regression testing	BTL3	PO1, PO2, PO3, PO4, PO6, PO7
CO3	Appraise test tools, object-oriented software testing according to their purpose and the test activities they support.	BTL5	PO1, PO2, PO5, PO6, PO7, PO10
CO4	Develop test casei for given problem with respect to structural and functional testing techniques.	BTL6	POl, POz, PO3, PO4, PO6, PO7
CO5	Adapt in a cross-functional Agile team to discuss principles and basic practices of Agile software development	BTL6	PO1, PO2, PO3, PO4, PO6, PO7, PO10