School of Computer and Information Sciences

Name of the Academic Program: **M.Tech (CS, AI) (M.Tech-III)**

Course Code : CS 453 Title of the Course: **Software Engineering Lab**
L-T-P : 1-0-2 Credits : 2

Prerequisite Course / Knowledge (If any): It is expected that the students must have done at least one programming course at undergraduate level.

Course Outcomes (COs)

After completion of this course successfully, the students will be able to

- CO-1: Create user stories (Create).
- CO-2: Develop test plans for test first development (Create).
- CO-3: Design & develop the stories (Create).
- CO-4: Develop Software requirements specification document (Create).
- CO-5: Apply object oriented and structured paradigms (Apply).
- CO-6: Apply coding principles and practices (Apply)

Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Program Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1	1	1	2	1	1	1	1	1	1	1	3
CO2	3	1	1	2	1	1	1	1	1	1	1	1
CO3	1	1	1	2	1	1	1	1	1	1	1	3
CO4	1	1	2	3	1	1	1	1	1	1	1	1
CO5	3	1	2	1	1	1	1	1	1	1	1	1
CO6	2	2	3	2	1	1	1	1	1	1	1	2

Detailed Syllabus:

For a given case study/problem statement, the following deliverables are to be realized

- Define stories
- Identify tasks and develop test plan for stories/task (with the help of specifications)
- Design and develop increments
- Test the increments and release the increment
- Apply object oriented and structured modelling
- Implement the case study for plan driven approach by writing use case specification, designing the system and implementing the same.

Reference Books:

1. Ian Sommerville (2016), "*Software Engineering*",10th Edition, Pearson Education Limited, Global Edition

2. Roger S Pressman, Bruce R Maxim(2015), "*Software Engineering, A Practitioner's Approach*", 8th Edition, TataMcGraw Hill, Indian Edition