SARVAJANIK UNIVERSITY
Sarvajanik College of Engineering and Technology
Bachelor of Technology

Year: B. Tech IV (Semester VII)

Subject Name: Agile Development and UX Design **Subject Code:** BTIT14701
Type of course: Professional Elective Course
Prerequisite (if any): Basics of Software engineering Models.

Rationale: Agile software development methodology helps software development teams to have high degree of collaboration with the clients, providing more opportunities for the team to truly understand the client's vision hence significantly improving the quality of their software at each release. The developers can adapt to changes quickly. UX is important in fulfilling the user's needs.

Teaching and Examination Scheme:

Teaching Scheme				Theory Marks			Practical Marks		Total
L	T	P	C	TEE	CA1	CA2	TEP	CA3	
3	0	0	3	60	25	15	0	0	100

CA1: Continuous Assessment (assignments / projects / open book tests / closed book tests) CA2: Sincerity in attending classes / class tests / timely submissions of assignments / self-learning attitude / solving advanced problems TEE: Term End Examination TEP: Term End Practical Exam (Performance and viva on practical skills learned in course) CA3: Regular submission of Lab work / Quality of work submitted / Active participation in lab sessions / viva on practical skills learned in course.

Contents:

Sr. No.	Contents	Total Hours
1.	**AGILE Development** Agile Best Practices, Agile process model -Extreme Programming, Scrum, Planning, Testing, and Refactoring.	09
2.	**AGILE Design** What is Agile Design? SRP: The Single-Responsibility Principle, OCP: The Open-Closed Principle, LSP: The Liskov Substitution Principle, DIP: The Dependency-Inversion Principle, ISP: The Interface-Segregation Principle.	10
3.	**UX Process** The Wheel: UX Processes, Lifecycle, Methods and Techniques, Scope, Rigor, Complexity and Project Perspective, Agile lifecycle Processes and the Funnel Model of Agile UX.	08
4.	**UX design** The Nature of UX Design, Bottom up versus Top-down Design, Generative Design:	08

	Ideation, Sketching, Critiquing, Prototype Candidate Design.	
5.	**UX evaluation methods and techniques** Empirical UX Evaluation :UX goals , Metrics and Targets Analytic UX Evaluation: Data Collection Methods and Techniques	08
6.	**Connecting Agile UX with Software Engineering** Agile UX Process, UX and SE Workflow in agile process, Measuring results	02

Suggested Specification table with Marks (Theory): (For B. Tech only)

Distribution of Theory Marks					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
15	25	10	10	-	-

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (Revised Bloom's Taxonomy)

Reference Books:

Sr no	**Title of book /article**	**Author(s)**	**Publisher and details like ISBN**	**Year of publication**	**Publication Edition**
1	Agile Software Development, Principles, Patterns, and Practices	Robert C. Martin, Micah Martin	Pearson Publication	2013	1st Edition
2	The UX Book Agile UX Design for a Quality User Experience	Rex Hartson, Pardha S. Pyla	Morgan Kaufman publication	2018	2nd Edition

Course Outcomes (CO):

Sr. No.	**CO statements**	**Marks % weightage**
CO-1	Understand the practices and philosophies of agile methods.	40%
CO-2	Examine the User experiences and User designs with empirical and Analytic evaluations.	30%
CO-3	Demonstrate the connection between UX design with Agile software	10%

	Development.	
CO-4	Use an agile UX design and Agile software development method as per the need of the project.	20%