



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering

Subject Code: 3171610

Semester – VII

Subject Name: Agile Development and UI/UX design

Type of course: Elective

Prerequisite: None

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 improve 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			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	0	0	3	70	30	30	20	150

Content:

Sr. No.	Content	Total Hrs
1	AGILE DEVELOPMENT: Agile Practices, Overview of Extreme Programming, Planning, Testing, Refactoring.	7
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.	11
3	UX and UX Design, The Wheel:UX Processes, Lifecycle, Methods and Techniques, Scope, rigor, complexity and Project perspective,Agile lifecycle Processes and the Funnel model of Agile UX.	7
4	The nature of UX design, Bottom up versus Top-down Design Generative Design :ideation,sketching,critiquing Prototype candidate design	7
5	UX evaluation methods and techniques	7



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	Empirical UX evaluation :UX goals , metrics and Targets Analytic UX evaluation:Data collection methods and Techniques	
6	Connecting Agile UX with Agile Software Engineering	3

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
10	30	20	10	0	0

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

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

- 1) Agile Software Development, Principles, Patterns, and Practices: International Edition by Robert C. Martin, Pearson Publication
- 2) The UX Book Agile UX Design for a Quality User Experience By Rex Hartson, Pardha S. Pyla, Morgan Kaufman publication
- 3) Designing Interfaces Patterns for Effective Interaction Design By Jenifer Tidwell, Charles Brewer, Aynne Valencia-Brooks · 2020 O'reilly

Course Outcomes:

Sr. No.	CO statement	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 Development.	10
CO-4	Use an agile UX design and Agile software development method as per the need of the project.	20