

Course Code:CSE3001	Course Title: Agile Development Process	TPC	3	2	4
Version No.	1.0				
Course Pre-requisites/ Co-requisites	CSE1005/CSE1003/SWE1003				
Anti-requisites (if any).	None				
Objectives:	1. To explore the benefits agile manifest and its accompanying principles 2. To compare agile and more traditional software development 3. To understand the agile methodologies such as Scrum and Lean Software Development				
Expected Outcome:	Upon Completion of the course, the students shall be able to 1. Understand the importance of interacting with business stakeholders in determining the requirements for a software system. 2. Examine the common agile development practices and methods such as Scrum. 3. Carry out all stages of an agile software process in a team, to produce working software 4. Adapt software engineering models, roles and processes to actual conditions, given the goal of delivering an end product that corresponds to the intended users' needs.				
Module No. 1	Introduction			7 Hours	
Introduction to Agile Software Process Model - Agile Methodology & Principles – Types – Benefits - Life Cycle, Agile Project Management – Design and Construction - Agile Testing- Agile Tools.					
Module No. 2	Agile Requirements			8 Hours	
Meeting the requirements challenge iteratively-Requirements for Agile approach – gathering & analysis –Behavior Driven Development (BDD) and Acceptance Test Driven Development (ATDD)- Designing storyboards and scrums in Agile approach					
Module No. 3	Product Initiation and Visioning			7 Hours	
Project / product initiation, Crafting a project vision, Visioning tools & techniques, Planning horizons, The product roadmap, The product backlog, Story mapping, Release planning.					
Module No. 4	Agile Methodologies			8 Hours	
Pair Programming – Refactoring – Dynamic Systems Development (DSD) – Feature Driven Development (FDD) – Test Driven Development (TDD) Agile Unified Process – Agile Failure Models - Various reasons why agile fails?					
Module No. 5	Scrum			8 Hours	
Scrum Foundations - Scrum Roles - Scrum Master - Product Owner – Team - Scrum Meetings - Scrum Artifacts - Product Backlog - Sprint Backlog - Burn-down Charts - Scaling Scrum – Manager in Scrum and Product Backlog					
Module No. 6	Agile Planning, Estimation and Quality Management			7 Hours	
Principles of Agile Metrics – Release, Planning and Estimation in Scrum, Intro to quality management, Common causes of defects, Technical debt, Traditional vs. agile testing, Test-driven development approaches					
Text Books 1. K.S. Rubin, “Essential Scrum: A Practical Guide to the Most Popular Agile Process”, Addison-Wesley, 1 st Edition, 2012,.					
References					

1. Succeeding with “Agile : Software Development using Scrum”, Pearson Publications, 1st Edition, 2016.
2. James Shore and Shane Warden, “ The Art of Agile Development” Oreilly publications, 1st Edition, 2008, .

Mode of Evaluation	Continuous Assessment Tests-60%, Practical Assessment-40%
	Continuous Assessment Test-1 20%
	Continuous Assessment Test-2 20%
	Continuous Assessment Test-3 20%
	Practical Assessment (Mini Project) 40%
Recommended by the Board of Studies on	06.07.2018
Date of Approval by the Academic Council	2 nd Academic Council 21.07.2018