PSE206 AGILE SOFTWARE DEVELOPMENT APPROACHES

	L	T	P	Cr
	3	0	2	4.0

Course Objectives: This course makes student learn the fundamental principles and practices associated with each of the agile development methods. To apply the principles and practices of agile software development on a project of interest and relevance to the student.

Agile Software Development: Basics and Fundamentals of Agile Process Methods, Values of Agile, Principles of Agile, stakeholders, Challenges

Lean Approach: Waste Management, Kaizen and Kanban, add process and products add value. roles related to the lifecycle, differences between Agile and traditional plans, differences between Agile plans at different lifecycle phases. Testing plan links between testing, roles and key techniques, principles, understand as a means of assessing the initial status of a project/ How Agile helps to build quality

Agile and Scrum Principles: Agile Manifesto, Twelve Practices of XP, Scrum Practices, Applying Scrum. Need of scrum, working of scrum, advanced Scrum Applications, Scrum and the Organization , scrum values

Agile Product Management: Communication, Planning, Estimation Managing the Agile approach Monitoring progress, Targeting and motivating the team, Managing business involvement, Escalating issue. Quality, Risk, Metrics and Measurements, Managing the Agile approach Monitoring progress, Targeting and motivating the team, Managing business involvement and Escalating issue

Agile Requirements: User Stories, Backlog Management. Agile Architecture**:** Feature-Driven Development. Agile Risk Management**:** Risk and Quality Assurance, Agile Tools

Agile Testing: Agile Testing Techniques, Test-Driven Development, User Acceptance Test

Agile Review: Agile Metrics and Measurements, The Agile approach to estimating and project variables, Agile Measurement, Agile Control: the 7 control parameters. Agile approach to Risk, The Agile approach to Configuration Management, The Atern Principles , Atern Philosophy ,The rationale for using Atern, Refactoring, Continuous integeration, Automated Build Tools

Scaling Agile for large projects: Scrum of Scrums, Team collaborations, Scrum, Estimate a Scrum Project, Track Scrum Projects, Communication in Scrum Projects, Best Practices to Manage Scrum.

Laboratory Work:exploring the tools related to Agile Development and approached and develop small projects using this technology.

Recommended Books

1. Agile Software Development, Principles, Patterns, and Practices (Alan Apt Series) Robert C. Martin (Author) ,2011
2. Succeeding with Agile : Software Development Using Scrum, Pearson 2010