

## Agile Software Development

<b>Course Code</b>	19CS4701C	<b>Year</b>	IV	<b>Semester</b>	I
<b>Course Category</b>	Program Elective - IV	<b>Branch</b>	CSE	<b>Course Type</b>	Theory
<b>Credits</b>	3	<b>L-T-P</b>	3-0-0	<b>Prerequisites</b>	Software Engineering, Software Metrics, Software project management
<b>Continuous Internal Evaluation :</b>	30	<b>Semester End Evaluation:</b>	70	<b>Total Marks:</b>	100

### Course Outcomes

Upon successful completion of the course, the student will be able to

<b>CO1</b>	Understand the fundamentals of agile methods in various development environments	L2
<b>CO2</b>	Apply the concepts of Xtreme programming in projects and make an effective report.	L3
<b>CO3</b>	Apply the Techniques of Feature-Driven Development to deliver tangible software results.	L3
<b>CO4</b>	Analyzethe given scenario and chose appropriate Agile methods/ tools for software Development.	L4

<b>Syllabus</b>		
<b>Unit No.</b>	<b>Contents</b>	<b>Mapped CO</b>
<b>I</b>	<b>Introduction:</b> The Agile manifesto, Agile methods, XP: Extreme Programming, DSDM, SCRUM, feature- Driven Development, modeling misconceptions, agile modeling, tools of misconceptions, updating agile models.	<b>CO1</b>
<b>II</b>	<b>Extreme Programming:</b> Introduction, core XP values, the twelve XP practices, about extreme programming, planning XP projects, test first coding, making pair programming work.	<b>CO1,CO2</b>
<b>III</b>	<b>Agile Modeling and XP:</b> Introduction, the fit, common practices, modeling specific practices, XP objections to agile modeling, agile modeling and planning XP projects, XP implementation phase	<b>CO1,CO2</b>
<b>IV</b>	<b>Feature-Driven Development:</b> Introduction, incremental software development, Regaining Control, The motivation behind FDD, planning an iterative project, architecture centric, FDD and XP	<b>CO1,CO3</b>

<b>V</b>	<p><b>Agile Methods with RUP and PRINCE2 and Tools and Obstacles:</b> Agile modeling and RUP, FDD and RUP, agile methods and prince2, tools to help with agile development, Eclipse, An agile IDE, obstacles to agile software development, management intransigence, the failed project syndrome, contractual difficulties, familiarity with agility.</p>	<b>CO1,CO4</b>
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<b>Learning Resources</b>
<b>Text Books</b>
1. Agile and Iterative Development: a manager's guide, Craig Larman, First edition, 2004, Addison Wesley.
<b>References</b>
1. The Art of Agile Development, Pearson, Robert C. Martin, Juli, James Shore, Chromatic, First edition, 2013, O'Reilly Media. 2. Software Project Management, Rajibmal, Sixth edition, 2017, McGraw Hill Education. 3. Agile software construction, John hunt, First edition, 2005, springer.
<b>e-Resources and other Digital Material</b>
1. <a href="https://agilesoftwaredevelopment.com">https://agilesoftwaredevelopment.com</a>