

**UNIVERSITY OF MADRAS**  
**BACHELOR OF COMPUTER APPLICATIONS (BCA)**  
**DEGREE PROGRAMME**  
 SYLLABUS WITH EFFECT FROM 2023-2024

**Year: III**

**Semester: V**

<b>Agile Project Management</b> Common for B.C.A. , B.Sc.-SA	<b>320E5C</b>
<b>Credits 3</b>	<b>Lecture Hours:4 per week</b>
<p><b>Learning Objectives:</b> (for teachers: what they have to do in the class/lab/field)</p> <ul style="list-style-type: none"> <li>To provide students with a theoretical as well as practical understanding of Agile software development practices and how small teams can apply them to creating high-quality software.</li> <li>To provide a good understanding of software design and a set of software technologies and APIs.</li> <li>To provide a detailed examination and demonstration of Agile development and testing techniques.</li> <li>To provide an understanding of the benefits and pitfalls of working in an Agile team.</li> </ul>	
<p><b>Course Outcomes:</b> (for students: To know what they are going to learn)</p> <p>CO1: Understanding of the Agile manifesto and its advantages over other SDLC paradigms.                  CO2: Understanding essential Agile concepts.                  CO3: Understanding how to plan and execute a project using Agile concepts                  CO4: Understanding Agile management concepts.                  CO5: Practical application of Agile principles.</p>	

Units	Contents
<b>I</b>	Introduction:Modernizing Project Management: Project Management Needed a Makeover – Introducing Agile Project Management. Applying the Agile Manifesto and Principles: Understanding the Agile manifesto – Outlining the four values of the Agile manifesto – Defining the 12 Agile Principles – Adding the Platinum Principles – Changes as a result of Agile Values – The Agile litmus test. Why Being Agile Works Better: Evaluating Agile benefits – How Agile approaches beat historical approaches – Why people like being Agile.
<b>II</b>	Being Agile:Agile Approaches: Diving under the umbrella of Agile approaches – Reviewing the Big Three: Lean, Scrum, Extreme Programming - Summary Agile Environments in Action: Creating the physical environment – Low-tech communicating – High-tech communicating – Choosing tools. Agile Behaviours in Action: Establishing Agile roles – Establishing new values – Changing team philosophy.
<b>III</b>	Agile Planning and Execution Defining the Product Vision and Roadmap: Agile planning – Defining the product vision – Creating a product roadmap – Completing the product backlog. Planning Releases and Sprints: Refining requirements and estimates – Release planning – Sprint planning. Working Throughout the Day: Planning your day – Tracking progress – Agile roles in the sprint – Creating shippable functionality – The end of the day. Showcasing Work, Inspecting and Adapting: The sprint review – The sprint retrospective. Preparing for Release: Preparing the product for deployment (the release sprint) – Preparing the operational support – Preparing the organization for product deployment - Preparing the marketplace for product deployment

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<b>IV</b>	<p>Agile Management</p> <p>Managing Scope and Procurement: What's different about Agile scope management – Managing Agile scope – What's different about Agile procurement – Managing Agile procurement.</p> <p>Managing Time and Cost: What's different about Agile time management – Managing Agile schedules – What's different about Agile cost management – Managing Agile budgets.</p> <p>Managing Team Dynamics and Communication: What's different about Agile team dynamics – Managing Agile team dynamics – What's different about Agile communication – Managing Agile communication.</p> <p>Managing Quality and Risk: What's different about Agile quality – Managing Agile quality – What's different about Agile risk management – Managing Agile risk.</p>
<b>V</b>	<p>Implementing Agile</p> <p>Building a Foundation: Organizational and individual commitment – Choosing the right pilot team members – Creating an environment that enables Agility – Support Agility initially and over time.</p> <p>Being a Change Agent: Becoming Agile requires change – why change doesn't happen on its own – Platinum Edge's Change Roadmap – Avoiding pitfalls – Signs your changes are slipping.</p> <p>Benefits, Factors for Success and Metrics: Ten key benefits of Agile project management – Ten key factors for project success – Ten metrics for Agile Organizations.</p>

**Learning Resources:**

**Recommended Texts**

1. Mark C. Layton, Steven J. Ostermiller, *Agile Project Management for Dummies*, 2<sup>nd</sup> Edition, Wiley India Pvt. Ltd., 2018.
2. Jeff Sutherland, *Scrum – The Art of Doing Twice the Work in Half the Time*, Penguin, 2014.

**Reference Books**

1. Mark C. Layton, David Morrow, *Scrum for Dummies*, 2<sup>nd</sup> Edition, Wiley India Pvt. Ltd., 2018.
2. Mike Cohn, *Succeeding with Agile – Software Development using Scrum*, Addison-Wesley Signature Series, 2010.
3. Alex Moore, *Agile Project Management*, 2020.
4. Alex Moore, *Scrum*, 2020.
5. Andrew Stellman and Jennifer Greene, *Learning Agile: Understanding Scrum, XP, Lean, and Kanban*, Shroff/O'Reilly, First Edition, 2014.

**Web resources**

1. [www.agilealliance.org/resources](http://www.agilealliance.org/resources)