

## Course Syllabus

### Agile Estimating and Planning

#### I. DESCRIPTION

As Agile methods and tools continue to grow in popularity, people are interested in how to leverage Agile to improve their projects. Contrary to what some people think, planning in Agile projects is more rigorous and disciplined than it is in traditional projects. The purpose of this course is to provide project managers, product owners, functional managers and agile team members with an in-depth understanding of how to plan for Agile projects.

Agile estimating and planning helps to get an initiative off on solid footing. Planning for Agile projects starts with the big picture of product roadmaps and release plans, and drills down into the work that an Agile team will do within an iteration and each day. Participants will work in teams to plan the development of a product from the vision stage to delivery in production. Participants will develop the product concept, release plan, team description, cost estimate and timelines for their chosen product. They will learn and practice techniques for communicating their Agile plans and timelines to leaders and stakeholders.

This course will be helpful to those who are familiar with estimating and planning traditional projects or who have an agile background but want additional detail on how to effectively plan agile projects.

This course qualifies as education contact hours for the Project Management Institute's Agile Certified Practitioner (PMI-ACP®) exam. Note that in order to sit for the PMI-ACP® exam, students must meet additional requirements set forth by PMI that can be found on their website.

#### II. COURSE LEARNING OBJECTIVES

Following this course, participants will be able to:

1. Apply the 6 levels of agile planning to a new initiative
2. Use lightweight techniques to generate a product vision
3. Create an initial product backlog
4. Create artifacts that clarify product needs and support the development of the product
5. Apply different techniques to split user stories
6. Use relative estimating to estimate a product backlog
7. Develop a schedule for the completion of a release of a product
8. Facilitate sprint planning for an agile team
9. Develop progress reporting tool appropriate to the type of project
10. Explain the considerations for scaling agile or planning for multiple agile teams

### III. COURSE OUTLINE

#### Unit 1: Introduction to Agile Estimating & Planning

- What makes something Agile
- Traditional vs. Agile Planning
- Understanding the Cone of Uncertainty
- The Six Levels of Planning

#### Unit 2: Product Planning

- Plan a product using various techniques like product box and elevator pitch, roadmaps, personas and wireframes
- Differentiate between Products vs. Platforms
- Develop an Initial Product backlog
- Use user story format for product backlog items

#### 3: Release Planning

- Overview of the Release Planning Process
- Prioritizing backlog items
- Leveraging the MVP
- Most features go unused
- Estimating backlog items using relative and absolute estimates
- Planning poker and affinity estimation
- Factors affecting the selection of sprint lengths
- Understanding Team velocity

#### Unit 4: Splitting User Stories

- Why split stories?
- Techniques for splitting

#### Unit 5: Developing Your Agile Schedule & Budget

- Develop an overall project schedule and budget for your project
- Determine if other traditional project plan components are required

#### Unit 6: Iteration / Sprint Planning

- Review Scrum Framework & Roles
- Overview of Sprint Planning
- Velocity & Commitment Planning
- Handling “other” Work During A Sprint

#### Unit 7: Tracking and Communicating Progress

- Monitoring the Release Plan
- Monitoring the Iteration Plan
- Leveraging Information Radiators
- Providing Regular Progress Reports

#### Unit 8: Planning Techniques for Multiple Teams

- Quick Overview of SAFe Scaling Framework
- LeSS Meetings
- Big Room Planning
- Establishing Program Milestone Dates
- Normalizing Story Points

#### Unit 9: Final Presentations

### **IV. EXERCISES**

Exercise 1: Course Goals

Exercise 2: Contrast Planning in Agile and Traditional

Exercise 3: Decide on Team Development Project

Exercise 4: Create Product Artifacts (Elevator Statement, Product Box, Wireframes and Personas)

Exercise 5: Develop Product Roadmap

Exercise 6: Create Initial Product Backlog

Exercise 7: Writing User Stories

Exercise 8: Prioritize Your Product Backlog

Exercise 9: Estimating Accurately

Exercise 10: Estimate with Planning Poker

Exercise 11: Estimate with Affinity Estimation

Exercise 12: Create Your Release Plan

Exercise 13: Penny Exercise

Exercise 14: Splitting User Stories

Exercise 15: Duration Estimate – Lawn Mowing

Exercise 16: Develop Your Project Schedule and Budget

Exercise 16: Sprint Planning Exercise

Exercise 17: Develop Progress Report

Exercise 18: Final Presentation to Leadership

## V. GRADING POLICY

Participation is the key to learning in this class. To facilitate your learning, there will be numerous team and class discussion topics many in class exercises. You will be graded on your participation in the team and class discussions, Q&A throughout the day, and exercises. It is important that you show up to every class in order to get the most out of your learning experience.

Grading for this class is based on in-class participation and engagement with your group. You will receive 1 point for every day that you come to class (2). You will receive an additional point for showing leadership in terms of participating in activities, discussion and Q&A. To pass the course, you need to come to every class and earn 1 leadership point (3 or more). If you need a letter grade for reimbursement, speak to the instructor at the start of the first class. To earn an "A" you will need 4 points. To earn a "B" you will need 3 points; a C will be 2 points and anything less is an F.

## VI. BIBLIOGRAPHY

### Books:

- Cohn, Mike, Agile Estimating and Planning, 2006.
- Hohmann, Luke, Innovation Games, 2006.
- Kniberg, Henrik, Scrum and Agile from the Trenches, 2007.
- Mersino, Anthony, Agile Project Management, 2015.
- Ries, Eric, The Lean Startup, 2011

### Documents:

- The Scrum Guide: <https://www.scrum.org/resources/scrum-guide>
- The Scrum Primer: <http://scrumprimer.org/>
- The Rally Release Planning Guide:  
<https://docs.ca.com/sites/default/files/multimedia/Rally%20Release%20Planning%20Guide.pdf>
- How to Split a User Story: <https://agileforall.com/wp-content/uploads/2012/01/Story-Splitting-Flowchart.pdf>
- Splitting User Stories Cheat Sheet, Christiaan Verwijs:  
<https://twitter.com/chrisverwijs/status/335109871802384385>

### Videos:

- Nordstrom Innovation Lab: <https://youtu.be/dS3sD96m8gc>
- Brief Explanation of Agile (Janlen): <https://youtu.be/Tj-lavaMkxU>
- Agile Product Owner in a Nutshell (Kniberg): <https://youtu.be/502ILHjX9EE>

**Websites:**

- Agile Manifesto: Source: <http://agilemanifesto.org/>
- Jeff Patton: <http://jpattonassociates.com/dont-know-what-i-want/>
- Standish Group: <http://theagileexecutive.com/2010/01/11/standish-group-chaos-reports-revisited/>
- Scaled Agile Framework (SAFe): <https://www.scaledagileframework.com/>