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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 a project 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. Participants will work in teams to plan the development of a smart phone application using iterative and incremental development techniques. Participants will develop release plans, team skills and cost estimates, and timelines for their smart phone application, and will learn techniques for communicating their Agile plans and timelines to leaders and stakeholders.

The course also looks at the two types of estimates used on agile projects, relative estimates in story points and absolute estimates in ideal days. Participants will learn when to use each of these, and how to include the entire team for more accurate estimates that team members will support.

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 OBJECTIVES

The purpose of this course is:
- To provide a reasonable depth of understanding in Agile Estimating and Planning techniques
- Learn various planning tools
- Learn in detail about estimating stories, product backlogs, tasks, and team velocity
- To provide insights in to sizing techniques
- To provide participants the opportunity to plan and estimate an agile project

III.   COURSE OUTLINE

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Wieboldt Hall, Sixth Floor
339 East Chicago Avenue
Chicago, Illinois 60611-3008

Phone   312-503-6950
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Unit 1: Agile Planning
- Why Planning
- The Cone of Uncertainty
- Purpose of Planning
- What Constitutes a Good Plan?
- Why Agile Planning Works
- Iterative and Incremental Development
- The Six Levels of Planning

Unit 2: Planning for Value in Agile Projects
- Prioritization
- Determining the Value of Backlog Items
- Value Based Decomposition
- Splitting User Stories

Unit 3: Estimating Techniques
- Relative and Absolute Estimating
- Estimating Size with Story Points
- Estimating Time with Ideal Days
- Planning Poker
- Affinity Estimating
- Re-Estimating

Unit 4: Building Your Agile Schedule

- Story Mapping
- Identifying the MVP / Release Candidate
- The Release Planning Meeting
- Making effective Plans with Buffering for Uncertainty

Unit 5: Iteration (Sprint) Planning

- Overview of Sprint Planning
- Velocity Driven Planning
- Commitment Based Planning

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- Handling "other" Work During A Sprint

Unit 6: Tracking and Communicating

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

Unit 7: Multi-Team Planning

- Quick View of Large Scale Scrum
- Look Ahead Planning for a Multi-Team Project
- Normalizing Story Points

Unit 8: Team Presentations

IV.   EXERCISES

Exercise 1: Course Goals
Exercise 2: Elevator Statement, Product Box, Wireframes and Personas
Exercise 3: Estimation Exercise
Exercise 4: Affinity Estimation
Exercise 5: Planning Poker
Exercise 6: Story Splitting
Exercise 7: Velocity-driven Planning
Exercise 8: Executive Presentation

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, and one or more 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

- Cohn, Mike, Agile Estimating and Planning, 2006.
- Kniberg, Henrik, Scrum and Agile from the Trenches, 2007.
- Mersino, Anthony, Agile Project Management, 2015.
- Ries, Eric, The Lean Startup, 2011
- Smith, Gred and Ahmed Sidky, Becoming Agile in an Imperfect World, 2009.