Course Description

This four-week course covers the techniques required to break down and map requirements into plans that will ultimately drive software production. Upon successful completion of this course, you will be able to:

- *Create effective plans for software development*
- *Map user requirements to developer tasks*
- *Assess and plan for project risks*
- *Apply velocity-driven planning techniques*
- *Generate work estimates for software products*

SOFTWARE PRODUCT MANAGEMENT Specialization

Course 4: AGILE PLANNING FOR SOFTWARE PRODUCTS

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Module 1
Introduction to Planning

Introduction: **Specialization Preview** *2 minutes*

Introduction: **Introduction to Agile Planning for Software Products** *4 minutes*

Course Resources: **Agile Planning for Software Products - Course Notes & Glossary**

Lesson 4.1.1(A): **Introduction to Planning** *12 minutes*
- *Recognize that planning is a necessary step*
- *Summarize release and iteration plans*
- *Recall key terms used within SPM*
  - *Recall the term task*
  - *Recall the term role*
  - *Recall the term schedule*
  - *Recall the term milestone*
  - *Recall the term work product*

Lesson 4.1.2: **Uncertainty Space** *6 minutes*
- *Summarize the concepts of the uncertainty space diagram*
  - *Make connections to Agile from previous course*
  - *Describe navigating the uncertainty space diagram*

Lesson 4.1.3: **Work Breakdown Structure** *14 minutes*
- *Summarize the term work breakdown structure*
- *Carry out a work breakdown structure on an example*
- *Recognize a task that is an appropriate size*

Peer Graded Assignment: **Work Breakdown Structure**
Passing threshold - 70% *Course weight 5%*

Lesson 4.1.4: **Estimates, Targets, and Commitments** *14 minutes*
- *Differentiate between the terms estimate, target, and commitment*
  - *Summarize the term estimate*
  - *Summarize the term target*
  - *Summarize the term commitment*
- *Identify an example as either an estimate, a target, or a commitment*

Reading: **Module 1: Supplemental Resources**

Module Assessment: **Quiz 1 – Graded** (8 questions)
Passing threshold - 70% *Course weight 10%*

Discussions: **Week 1**

Module 2
Project Planning

Lesson 4.2.1(A): **Story Points** *16 minutes*
- *Summarize the term story point*
  - *Identify different ways of sizing a task*
- *Generate an story point for a user story*
  - *Recall the term user story*

Discussions: **User Story Points**

Lesson 4.2.2: **Velocity Estimates** *9 minutes*
- *Summarize the term velocity*
  - *Identify the steps in calculating velocity*
  - *Identify factors that influence velocity*
  - *Identify what makes velocity stable*
- *Calculate the velocity of an example*
- *Recognize that a story is only counted towards velocity if the story is done*
  - *Summarize the concept of done*

Discussions: **Velocity**

Lesson 4.2.3: **Time Boxing** *6 minutes*
- *Describe what a time box is*
- *Recall how story points work*
- *Summarize the term release*
- *Summarize the term time boxing*
- *Explain how time boxing relates to Scrum*

Lesson 4.2.4: **Gantt Charts** *5 minutes*
- *Summarize the concept of the Gantt Chart*
  - *Recognize that the Gantt could be at the task level or release level*

Lesson 4.2.5: **Release Plans** *15 minutes*
- *Recognize the individual aspects of a release plan*
- *Assemble a release plan*

Peer Graded Assignment: **Release Planning**
Passing threshold - 80% *Course weight 5%*

Reading: **Module 2: Supplemental Resources**

Module Assessment: **Quiz 2 – Graded** (eight questions)
Passing threshold - 70% *Course weight 10%*

Discussions: **Week 2**

Module 3
Iteration Planning

Lesson 4.3.1(A): **Estimating Task Time** *20 minutes*
- *Recognize what a good estimate entails*
  - *Identify issues with estimation*
  - *Summarize the concepts of the Cone of Uncertainty*
- *Summarize the approaches for creating estimates (Bottom-up, analogy, experts)*
- *Determine (calculate) the task time using the formula*

Course Resources: **Worksheet: Calculating Task Time**

Discussions: **Estimating Task Times**

Lesson 4.3.2: **Task Dependencies** *7 minutes*
- *Recognize that tasks can depend on each other*
  - *Summarize the term start-start*
  - *Summarize the term start-finish*
  - *Summarize the term finish-start (most common)*
  - *Summarize the term finish-finish*

Lesson 4.3.3: **Critical Path Method Chart** *10 minutes*
- Summarize the concept of CPM chart
  - Summarize the term critical path
  - Summarize the term slack

Lesson 4.3.4: **Pert Chart** *9 minutes*
- *Summarize the concept of PERT chart*
  - *Summarize the term critical path*
  - *Differentiate between the CPM Diagram and the PERT chart*
  - *Summarize the term slack*
- *Generate a PERT Chart*

Peer Graded Assignment: **CPM Chart**
Passing threshold - 80% *Course weight 5%*

Lesson 4.3.5: **Iteration Plan** *11 minutes*
- *Summarize the concept of an iteration plan*
  - *Summarize the term iteration*
- *Recognize that this is not assigned work—this is to be self-assigned by developers*
- *Assemble an iteration plan*

Reading: **Module 3: Supplemental Resources**

Module Assessment: **Quiz 3 – Graded** (8 questions)
Passing threshold - 70% *Course weight 10%*

Discussions: **Week 3**

Module 4
Risk Planning

Lesson 4.4.1(A, B, C, D): **Anti-Patterns** *40 minutes*
- *Summarize anti-patterns that should not be followed*
  - *Identify anti-patterns that should not be followed*
  - *Recognize why these anti-patterns should not be followed*

Lesson 4.4.2: **Causes of Failures** *6 minutes*
- *Determine the risks in a scenario*
  - *Summarize the term risk*
  - *Identify types of risks*

Lesson 4.4.3: **Risk Assessment, Likelihood, and Impact** *10 minutes*
- *Summarize the impact vs. likelihood matrix*
  - *Summarize the term impact*
  - *Summarize the term likelihood*
  - *Recognize the magnitude of a scenario in relation to the matrix*
- *Determine where a scenario falls on the matrix*

Lesson 4.4.4: **Risk Strategies, Contingency, Mitigation** *10 minutes*
- *Generate a risk management plan*
  - *Summarize the term risk management plan*
  - *Summarize the term risk*
  - *Summarize the term indicator*
  - *Summarize the term action*
  - *Recognize how to prioritize risks*
- *Summarize the term unforeseen risks*

Discussions: **Product Management Techniques**

Reading: **Module 3: Supplemental Resources**

Module Assessment: **Quiz 4 – Graded** (8 questions)
Passing threshold - 70% *Course weight 15%*

Course Assessment: **Course Final Quiz – Graded** (36 questions)
Passing threshold - 75% *Course weight 40%*

Discussions: **Week 4**

NOTE: The lesson number refers to the course, module, and lesson. For example, lesson 1.2.3 refers to the first course, second module, third lesson.