

Syllabus for N7 Engineering Academy Work Item Estimating Fundamentals Workshop

Course Content

This course provides in-depth training on MSC cost estimating policies and practices pertaining to researching, decomposing, and estimating the costs associated with detailed and performance-like work items. The course includes practical exercises in the decomposition and estimating of new and existing detailed and performance-like work items. The subject matter is considered intermediate in nature. The modules covered in this course include:

- Work Item Estimating Fundamentals
- Decomposition and Estimating Exercises
- Creating Bottom-up Estimates for Detailed and Performance-Like Work Items

Target Audience

The target audience for this course is all new-hire N7 personnel. This course is also appropriate for experienced N7 personnel who want to refresh their proficiency in certain subject matter areas.

Prerequisites

Completion of:

- Introduction to Military Sealift Command course
- MSC Regulatory Standards, Inspections, Maintenance Availability Overview, and Engineering Budgets course

Administration

Enrollment is on a first come, first served basis. You can self-register for this course online at <http://mscn7training.com>. Successful completion of this course requires 100% attendance.

Schedule

This course is conducted over a period of two consecutive days. Classes begin at 8:00 AM and end at 5:00 PM each day. The schedule for the course modules is as follows:

Day One	0800-0830	Course Introduction
	0830-1700	Work Item Estimating Fundamentals
Day Two	0800-1700	Decomposition and Estimating Exercises

Day Three	0800-1700	Creating Bottom-up Estimates for Detailed and Performance-Like Work Items
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Topic Descriptions:

Work Item Estimating Fundamentals - The topics covered in this module include: MSC's work item estimating policies and practices; FAR Requirements for Independent Government Estimates (IGE); how to establish "or equal" pricing; sources of material estimates; estimating growth work; establishing Cat B work item rates; MSC Work Item Estimating Guide; Butler's Estimating Guide; learning how to decompose a work item's statement of work; standardized estimating template; differences between various levels of estimate accuracy (e.g. ROM vs Feasibility estimate); understanding the difference between parametric and non-parametric estimating techniques; establishing labor hour requirements for new work; need to revise work type estimates based on location.

Decomposition and Estimating Exercises - This module provides an opportunity to decompose the statement of work in MSC work items for the purpose of creating detailed cost estimates. Participants will perform exercises that reveal the accuracy and variability of estimates on even the simplest tasks. Participants will conduct exercises using a standardized, yet customizable template that populates data onto MSC estimating forms, providing details for later review or use by contracting representatives during negotiations. Participants will participate in individual and collective estimating exercises, provide insights based on their experience, and share approaches used. Participants will have the opportunity to bring their own work items in for estimating, or address any of several existing work items provided by the instructor.

Creating Bottom-up Estimates for Detailed and Performance-Like Work Items - This module provides an opportunity for each participant to create bottom-up, detailed estimates which will be subsequently reviewed by their peers. Participants will create a ROM followed by a detailed estimate of a historical item that caused a 2-week delay in negotiation due to differences in approach by the port engineer and the contractor. Participants learn the value of using a 3rd party review of their estimates during discussions on the approach and detail contained in their estimates. Participants will gain insights based on creating and critiquing the estimates of their peers, while learning more about the subjective "art" of estimating.

Date	Version	Description	Author
5/14/19	0.0	Initial draft	Kevin Sorbello

8/14/19	0.1	Revised target audience and prerequisites per discussion with Al Ronald (N7X Competency Manager)	Gary Fields
11/25/19	0.2	Revised Administration section	Gary Fields
4/1/22	0.3	Revised schedule to add a course introduction module	David Leyh
6/1/22	0.4	Corrected course title	Gary Fields