Software Cost Estimating (CLB023)

About the Module

Select here to print this lesson. It is suggested that you save the document to your computer before printing. Select the link, then select 'Save a Copy' from the Adobe Reader toolbar and save to your Desktop or local drive.

Module Overview

Welcome to the Continuous Learning Module on Software Cost Estimating (SCE).

This module presents an introduction to Software Cost Estimating (SCE), to help you determine if a software cost estimate is realistic and defendable given DoD policy and guidelines. This module is intended for those requiring basic familiarization and requirements information regarding the steps of cost estimating. The target audience for this module includes:

- Cost Estimators
- Business and Financial Managers
- Program Managers
- Acquisition Logisticians
- System Engineers
- Software Engineers
- Software Quality Engineers

This web-based module contains informative content and user interaction using text, graphics, and exercises. The content of the module is divided into lessons, or topics, each covering a different step of the Software Cost Estimating (SCE) process. There is also a Case Study integrated into the course that shows the cost estimating process applied to a real world project.

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Course Objectives

This module consists of the five steps that are typically involved in Software Cost Estimating. To ensure cost estimation is realistic and defendable, we will include questions that managers should ask within each step. Select a step below to view the objectives associated with the topic.

Define the System and Cost Drivers

Collect and Analyze Data

Select a Model

Develop and Test the Estimate

Document and Defend the Estimate

Define the System and Cost Drivers

- Identify the purpose and use of a software cost estimate
- Interpret a Cost Analysis Requirements Description (CARD)
- Identify cost estimating ground rules and assumptions
- Ensure that the estimate is based upon the program's Cost Element Structure (CES) and/or Work Breakdown Structure (WBS)
- Compare different contract types as they impact cost

Collect and Analyze Data

- Recognize how to identify, collect, analyze, and normalize data

Select a Model

- Compare and contrast parametric, analogous, and engineering estimate models
- Identify the constraints that determine the methodology, necessary Cost Estimating Relationships (CERs), and models used in a cost estimate
- Determine when off-the-shelf cost models are appropriate for use

Develop and Test the Estimate

- Review the software cost estimate
- Analyze the final cost estimate for reasonableness and completeness
- Identify requirement variables with a degree of uncertainty
- Analyze the range of the values for the variables (probability distribution)
- Analyze the calculations for their impact on cost, based on the ranges
- Determine the validity of a confidence interval

Document and Defend the Estimate

- Identify the criteria and procedures associated with presenting and defending the cost estimate and analysis
- Describe economic analysis
- Identify the required supporting documentation for a cost estimate

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System Requirements

In order to access all features of this module, your computer must meet specific system requirements and have the necessary software applications. Select each of the options below for system information and instructions on accessing plug-ins.

Recommended Screen Resolution

Adobe® Flash® Player   Get ADOBE FLASH PLAYER

Adobe® Reader®   Get ADOBE READER

Accessibility

Additional Support

Recommended Screen Resolution

Your screen resolution determines how the content appears within your computer monitor. To view the entire content window, your screen resolution should be at least 800 x 600 pixels. To change your screen resolution:

- Go to the **Start** button of the Taskbar, then select **Control Panel**.
- Select the **Display** button.
- From the Display window, select the **Settings** tab.
- In the **Screen Resolution** area, move the slider to **800 x 600**.
- Select **OK**.
- A message appears that informs you that your screen may flicker. Select **OK**.
- A confirmation message then appears and asks you if you want to keep your settings. Select **OK**.

Adobe® Flash® Player

Adobe® Flash® Player is necessary to view some of the presentations embedded within the content. If you are not sure whether your computer has the necessary plug-in, you can run a quick test here.

If you do not have Flash® Player, select the 'Get Adobe® Flash® Player' icon to the left to download the software.

Adobe® Reader®

Adobe® Acrobat® or the Adobe® Reader® software is necessary to access some of the documents embedded in this course. If you are not sure whether your computer has these applications, you can run a quick test here.

If you do not have Adobe® Acrobat® or Adobe® Reader® on your computer, select the 'Get Adobe® Reader®' icon to the left to download the software.

Accessibility

Microsoft® Windows® allows you to change some of the features on your computer. This can be useful if you have physical or visual needs that require special accommodation. The Windows® Accessibility Options are located in your Control Panel.

To make changes to your computer's settings, simply do the following:

- Select **Start** from the Taskbar to open the Start menu.
- Select **Control Panel**.
- From the Control Panel window, select **Accessibility Options**. In the Accessibility Options dialog box, you may change a number of different options on your computer.

Additional Support

If you experience any issues with the course or require additional assistance to make the necessary system changes, contact dauhelp@dau.mil or call the Help Desk at (703) 805-3459 or DSN 655-3459.

Navigation and Layout

This module shell contains features that are available to you throughout this course. Select the image to activate and use this control. Then select each of the features below for a description of each and their location.

Subtitle

Table of Contents

Navigation Buttons

D

Long Description

This flash animation highlights the navigation and layout features of this module.

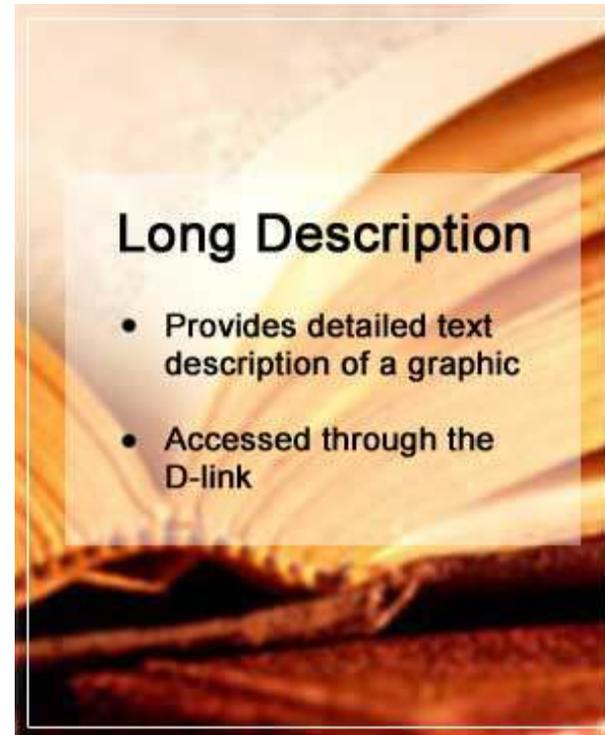This module shell contains features that are available to you throughout this course.

- The subtitle on each screen indicates the lesson or topic.
- The **Table of Contents** displays each lesson name. When you finish a lesson, select the next lesson name to continue.
- Select the **Back** button to access the previous page in the lesson.
- Select the **Next** button to access the next page in the lesson.

Example Links

Hyperlinks are embedded in different areas of the content to provide you with more access to information. Hyperlinked text is always underlined and appears in either red or blue text:

- Links identifiable by blue text include links to external web sites and to pop-up windows that may contain documents or other resources.
- Links identifiable by red text are glossary terms. Clicking the highlighted text provides access to a definition of that text.
- Links that consist solely of the letter D are links that provide more descriptive information about an image (an example D-Link can be found beneath the image to the right).

In addition, the 'Quick References' button located in the lower left on the first and last page of each lesson links to a course-level list of all website hyperlinks in the course. Select the Quick References button below for the Quick References available in this course.

Long Description

- Provides detailed text description of a graphic

- Accessed through the D-link

D

Pop-up

This is a sample of text in a pop-up window. You must select the 'Close' button to return to the main content screen.

D

This is an example of a long description for a graphic. The text contained here will give an explanation of more complex images. You must select the 'Close' button to return to the main content screen.

Long Description

Image of an open book with the following text:

Long Description**:**

- Provides detailed text description of a graphic
- Accessed through the D-link

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Knowledge Reviews

Each lesson of the module will contain periodic questions and interactions used to refresh students' memories.

Note: These questions are not assigned any point value and should not be confused with Exam questions which must be completed to obtain credit for the course.

The following Knowledge Review demonstrates a typical multiple choice question.

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Knowledge Review Example (Multiple Choice)

This is a multiple choice question. Select the best answer, then select the Submit button.

How many options typically appear in a multiple choice question?

○ **Two**

○ **Three**

○ **Four**

○ **Five**

Summary

In this lesson, you learned:

- The course objectives for the Software Cost Estimating (SCE) Continuous Learning Module.
- The system requirements needed to view and interact with the course.
- How to navigate through the course.
- How to access additional information using links, glossary terms, and pop-ups.
- The purpose of Knowledge Reviews.

Select another topic from the Table of Contents to proceed.