



**DEFENSE ACQUISITION UNIVERSITY**  
**BCF 106 - Fundamentals of Cost Analysis**

150205

*Course Learning/Performance Objectives followed by its  
enabling learning objectives on separate lines if specified.*

1	<b>Discuss the people, processes, and products associated with life cycle cost estimating within the Department of Defense</b>
	List and define the elements of a life cycle cost estimate.
	Describe the purpose of various life cycle cost estimates (POE, CCA, SCP, ICE) and the organization responsible for each estimate.
	Discuss the cost estimating process; to include the Cost Analysis Requirements Description (CARD), work breakdown structures (WBS) and cost element structures (CES), and the various methodologies used for cost estimating.
2	<b>Discuss the uses of expert opinion, cost factors, and analogies.</b>
	Discuss the uses of expert opinion and the techniques used to interview experts.
	Discuss the procedures and techniques involved in the development and application of cost factors
3	<b>Describe a functional cost breakdown structure that allocates costs using categories such as manufacturing and engineering, labor and materials, and direct and indirect.</b>
	Compare and contrast direct and indirect costs.
	Describe and define the categories of labor and materials costs.
	Describe other elements of cost which include: (1) other direct costs; (2) general and administrative costs; (3) cost of money; and (4) profit or fee.
4	<b>Determine the proper use of DoD inflation indices.</b>
	Discuss the concept of inflation and inflation indices.
	Define inflation terminology such as base year, constant year, then year, and the raw, compound, composite, and weighted inflation indices.
	Convert a dollar value from one base to another using the correct indices and operations.
5	<b>Develop descriptive and inferential statistics from one variable data.</b>
	Define and calculate the measures of central tendency (i.e. the mean, median, and mode).
	Define and calculate the measures of dispersion (i.e. the range, variance, standard deviation, and coefficient of variation).
	Determine an area of probability under a normal distribution.
	Calculate confidence intervals for both small and large sample sizes
	Perform one-tailed and two-tailed hypothesis tests
6	<b>Discuss and apply linear and nonlinear regression techniques.</b>
	Calculate the coefficients for a linear equation.
	Interpret and apply a linear equation.
	Calculate and explain the coefficient of determination.
	Calculate and explain the standard error and the coefficient of variation.
	Determine the statistical significance of an equation.
	Discuss the development and use of a log linear (power) equation.
	Compare and contrast the statistics of a linear and log linear equation.
7	<b>Discuss the use of learning curves in forecasting recurring production costs.</b>
	Describe the concept of a learning curve or what we might call cost improvement.
	Calculate and interpret the components of the unit learning curve equation.
	Develop the equation of a learning curve from a data set.
	Calculate the cost of a unit using the unit learning curve formulation.
8	<b>Discuss the means of identifying and quantifying the risk associated with a program estimate.</b>
	Describe risk and the process of risk management.
	Describe and perform a Sensitivity Analysis.
	Describe and perform a Symmetric Approximation.
9	<b>Discuss the guidance and terminology associated with time phasing an estimate.</b>



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	Describe the process of developing a budget plan.
	Explain the general appropriation principles such as incremental funding, full funding, and annual funding.
	Discuss some of the special funding issues such as multi-year procurement, low rate initial production, and product improvement.
10	<b>Define the concept of an Economic Analysis within the Department of Defense.</b>
	Explain the concept of discounting, including the construction of discount factors
	Describe the EA process and associated terminology.
	Develop a cash flow diagram (CFD) for an alternative.
	Determine the NPV of a cash flow
	Calculate the Uniform Annual Cost of a cash flow.
11	<b>Discuss various procurement approaches and their impact on the final price of a good or service.</b>
	Describe the considerations for determining the contract type.
	Compare and contrast different contracting arrangements.
	Determine the share ratio and the final price under an incentive contract arrangement