Objectives Sheet

BCF 132 - Applied Cost Analysis

Course Learning/Performance Objectives followed by enabling learning objectives

BCF 132.U01.01	**Explain the activities involved with the various steps of the Cost Estimating process**
BCF 132.U01.01.01	Identify each of the steps in the cost estimating process
BCF 132.U01.01.02	Explain the purpose of each step in the cost estimating process
BCF 132.U02.01	**Apply activities necessary for Data Collection**
BCF 132.U02.01.01	Explain key considerations when developing a data collection plan
BCF 132.U02.01.02	Identify key data sources for cost estimate development
BCF 132.U02.01.03	Explain the type of data found in the Cost & Software Data Reports (CSDRs)
BCF 132.U02.01.04	Explain the differences between direct/indirect, fixed/varible, and recurring/nonrecurring costs
BCF 132.U02.01.05	Query and export data from cost databases for data analysis
BCF 132.U03.01	**Describe and apply the activities performed during Normalization**
BCF 132.U03.01.01	Describe three major normalization adjustments to historical data
BCF 132.U03.01.02	Differentiate between Escalation and Inflation
BCF 132.U03.01.03	Distinguish between a Raw Index and a Weighted Index
BCF 132.U03.01.04	Develop Raw and Weighted Indices
BCF 132.U03.01.05	Distinguish between Constant Price, Then Year, and Constant Year Dollars
BCF 132.U03.01.06	Given appropriate inflation indices, normalize data for economic effects
BCF 132.U04.01	**Explain the process of performing an analogy**
BCF 132.U04.01.01	Discuss the potential types of adjustments necessary when conducting an analogy
BCF 132.U04.01.02	Explain the use of experts in performing analogies and other estimating techniques
BCF 132.U04.01.03	Describe the attributes of a factor
BCF 132.U04.01.04	Discuss the limitations of using a factor
BCF 132.U04.01.05	Explain how a contractor allocates indirect cost to a contract
BCF 132.U04.01.06	Explain what a contractor's fully burdened rate includes
BCF 132.U04.01.07	Given contractors rates, calculate a fully burdened rate
BCF 132.U05.01	**Describe the concept of Earned Value Management**
BCF 132.U05.01.01	Identify the metrics used in Earned Value to manage acquisition programs
BCF 132.U05.01.02	Describe two methods of forecasting an Estimate At Complete (EAC)
BCF 132.U05.01.03	Describe the relationship between Earned Value data and budget execution
BCF 132.U05.01.04	Describe the role Earned Value Management plays in the PM/BCEFM functions of balancing work scope, cost and schedule parameters
BCF 132.U05.01.05	Describe the role of Earned Value data in the oversight process
BCF 132.U05.01.06	Provide an assessment of the cost and schedule status of a contract using Earned Value data and metrics
BCF 132.U05.01.07	Describe the analysis of a contract using Earned Value Management tools
BCF 132.U05.01.08	Explain at least two methods of forecasting an Estimate at Completion (EAC)
BCF 132.U05.01.09	Explain how data from Earned Value reports can be used to assess the current status of a contract and to project the future status of that contract execution
BCF 132.U05.01.10	Estimate a cost element using factors
BCF 132.U06.01	**Given a data set, apply descriptive and inferential statistics**
BCF 132.U06.01.01	Generate and interpret the measures of central tendency
BCF 132.U06.01.02	Use the descriptive statistics output and histogram to determine which measure of central tendency best represents the data
BCF 132.U06.01.03	Generate and interpret the measures of dispersion
BCF 132.U06.01.04	Identify outliers in the data, and recommend appropriate investigative steps
BCF 132.U06.01.05	Generate and explain a confidence interval
BCF 132.U06.01.06	Generate and explain a prediction interval
BCF 132.U07.01	**Apply simple linear regression (SLR) analysis in developing cost estimating relationships**
BCF 132.U07.01.01	Describe correlation of data showing a linear relationship
BCF 132.U07.01.02	Use EXCEL to conduct linear regression analysis

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BCF 132.U07.01.03	Explain the three sections of EXCEL regression analysis output
BCF 132.U07.01.04	Determine significance of slope using the t-statistic and the p-value
BCF 132.U07.01.05	Explain and use goodness of fit statistics for SLR models
BCF 132.U07.01.06	Execute outlier analysis for the SLR varibles
BCF 132.U07.01.07	Evaluate residuals from SLR
BCF 132.U08.01	**Apply non-linear regression in developing cost estimating relationships**
BCF 132.U08.01.01	Interpret the general formula for a Power equation
BCF 132.U08.01.02	Interpret goodness-of-fit statistics used for Power models
BCF 132.U08.01.03	Use Excel™ to formulate several examples of ower cost estimating model
BCF 132.U08.01.04	Select the preferred model among linear and non-linear options
BCF 132.U09.01	**Apply the unit cost learning theory**
BCF 132.U09.01.01	Describe what affects learning
BCF 132.U09.01.02	Distinguish between the two theories of learning curves
BCF 132.U09.01.03	Generate the Unit Learning Curve model using unit and lot data
BCF 132.U09.01.04	Calculate unit costs based on model
BCF 132.U09.01.05	Calculate total cost of a lot using two different methods
BCF 132.U10.01	**Describe common techniques to perform cost risk and uncertainty analyses**
BCF 132.U10.01.01	Understand the motivation for risk and uncertainty analysis
BCF 132.U10.01.02	Identify sources of uncertainty
BCF 132.U10.01.03	Differentiate between risk and uncertainty
BCF 132.U10.01.04	Define purpose of cost risk and uncertainty analysis (CRUA)
BCF 132.U10.01.05	Identify common techniques used to conduct CRUA
BCF 132.U10.01.06	Apply the symmetric approximation technique to assess the cost uncertainty
BCF 132.U11.01	**Apply activities necessary to convert the cost estimate into a budget estimate**
BCF 132.U11.01.01	Describe the four tasks that must be performed to convert your cost estimate into a budget estimate
BCF 132.U11.01.02	Differentiate between the three funding policies that form the backbone of the Department of Defense's budget
BCF 132.U11.01.03	Describe how to map appropriations to your time-phased cost estimate
BCF 132.U11.01.04	Describe and create the most appropriate spreading method given an estimating case and available data
BCF 132.U11.01.05	Develop a time-phased estimate in a Constant Price (CP) Dollars
BCF 132.U11.01.06	Define an outlay profile
BCF 132.U11.01.07	Given an outlay/spend profile and an escalation index table, create a weighted index
BCF 132.U11.01.08	Apply weighted escalation indices to convert a time phased estimate from Constant Price to Then Year (TY) Dollars