



DEFENSE ACQUISITION UNIVERSITY
CON 235 - Advanced Contract Pricing

090210

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

1	<p>Recognize, understand and apply market forces that impact the price equation of a commercial item.</p> <p>Explain the impacts of Acquisition Reform on Pricing</p> <p>Explain the nature of pricing in the commercial market place and why teaming frequently results in a better procurement</p> <p>Explain market forces that enter into and impact the pricing equation</p> <p>Explain the differences between industrial buying/pricing behavior in the federal market place versus the commercial market place</p> <p>Explain the impact of various forms of contract financing on price</p>
2	<p>Understanding the importance of historical information to estimating future contract cost/price and learning a systematic methodology for pursuing that information, apply the same principles and procedures to practical contract pricing issues.</p> <p>Discuss what market research is and its purpose</p> <p>Describe the various categories of market information</p> <p>Discuss the sources of market data and advantages of data analysis</p> <p>Evaluate the results of market research to determine which pricing approach best fits a procurement situation</p>
3	<p>Identify how to best use these resources.</p> <p>Explain what information you should obtain from a functional expert.</p> <p>Determine what you should know before contacting the person.</p> <p>Discuss interviewing techniques.</p>
4	<p>Given decision alternatives, determine the probability associated with the various outcomes.</p> <p>Given various decision alternatives, construct payoff tables and select the alternative with that optimizes the given constraints.</p>
5	<p>Use the analogy estimating technique to determine the cost/price of a good or service.</p> <p>Determine when it is appropriate to use an analogy.</p> <p>Discuss the strengths and weaknesses of the analogy technique.</p> <p>Given information on an analogous task or item, develop an estimate for your task or item using the analogy technique.</p>
6	<p>Identify/list the means for developing EACs.</p> <p>Discuss how we measure the contractor's baseline and evaluate performance against that baseline.</p> <p>Identify several measures of performance using the cost and schedule variances.</p> <p>Apply various performance indices to develop an estimate-at-completion.</p> <p>Given an EAC, evaluate it to determine if it is reasonable.</p>
7	<p>Given sample data on a single variable, develop a point estimate, an objective range, and measures of expressing uncertainty.</p> <p>Identify measures of central tendency.</p> <p>Identify measures of dispersion.</p> <p>Discuss the use of the T distribution in hypothesis testing.</p> <p>Calculate a point estimate and develop a confidence interval for the mean.</p>
8	<p>Given a point estimate, provide the decision maker with information regarding the impact that estimating assumptions have on the estimate.</p> <p>Describe the risk management process, explaining the purpose of each of the phases as instructed in class.</p> <p>Understand the use of various probability distributions to model risk.</p> <p>Develop the probability of success for an estimate given assumptions about the cost elements.</p> <p>The student will also be able to determine the amount of resources required to obtain a given probability of success.</p>
9	<p>Given a requirement to estimate the cost/price of a task or service, explain the regulatory implications of parametric estimating and outline a structured methodology for developing a parametric model.</p> <p>Define parametric estimating.</p> <p>Explain the regulatory implications of the use of parametric models and discuss the current trends in the use of parametric estimating.</p> <p>Explain the identification step, the different types of cost drivers, and discuss the qualities of a good cost driver.</p> <p>Discuss the importance of specification and the range of the data.</p>



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	Address the different considerations for determining what is analogous data.
10	Given two variables, and using the most appropriate statistical technique, analyze and describe the nature of the relationship between the two variables. Describe potential weaknesses in single variable techniques. Fit a line relating two sets of data. Develop an estimating equation using the Least Squares Best Fit model. Recognize outliers/influential observations and dealing with them. Examine the analysis of variance to determine the efficiency of the estimating equation.
11	Given two variables, and using the most appropriate statistical technique, analyze and describe the nature of the relationship between the two variables. Describe the strengths and weaknesses of cost factors. Develop a factor as: (1) a simple ratio; and (2) an estimating equation without an intercept using the Least Squares Best Fit model. Prediction intervals for the dependent variable.
12	Given multiple explanatory variables and a dependent variable, perform a multiple regression analysis, and defend the analysis and decisions derived from that analysis. Determine the amount and type of data to include. Determine which variables to include. Evaluate logic of model formulation. Examine the analysis of variance in multiple regression Assess goodness of fit. Construct hypothesis tests for regression coefficients
13	Determine when the relationship between two variables may not be linear in unit space, and use the most appropriate statistical technique to analyze and describe the nature of the relationship between the two variables. Discuss the use of scatter plots and residual plots to evaluate the relationship between variables. Determine what transformation of the independent variable would be appropriate when the relationship between two variables does not appear to be linear. Given various functional forms of the relationship between two variables, determine what estimating relationships would be appropriate when using log-linear transformations of both variables. Recognize the differences between linear and log-linear regression.
14	Quantify the effect that quantity has on cost when we conclude that increasing production quantities lead to reductions in unit cost. Address the impact that breaks in production have on the cost/quantity relationship. Discuss the underlying assumptions of cost improvement. Apply the unit learning curve theory to develop an estimating relationship and to predict the cost of future units. Apply the cumulative average learning curve theory to develop an estimating relationship and to predict the cost of future units. Assess the impacts of breaks in production.