Business Analytics

Business Analytics introduces quantitative methods used to analyze data and make better management decisions. This course is not based on rote memorization of equations or facts, but focuses on honing your understanding of key concepts, your managerial judgment, and your ability to apply course concepts to real business problems.

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<th>Modules</th>
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| Module 1              | Describing and Summarizing Data                                         | • Create visual representations of data that allow you to recognize trends and detect outliers  
                              • Define and calculate descriptive statistics to summarize data sets concisely  
                              • Analyze relationships between two variables by creating scatter plots and calculating the correlation coefficient |
| Module 2              | Sampling and Estimation                                                  | • Determine an adequate sample size, explain the importance of random sampling, and craft sound survey questions to create representative samples  
                              • Draw conclusions about the larger population by calculating sample statistics and applying the properties of the normal distribution  
                              • Estimate the accuracy of statistics by calculating confidence intervals |
| Module 3              | Hypothesis Testing                                                      | • Develop and test hypotheses to assess the impact of changes on an entire population or estimate differences between populations  
                              • Quantify the evidence in favor of or against your hypothesis in order to make managerial decisions |
| Module 4              | Single Variable Linear Regression                                       | • Identify the best fit line for a data set and interpret its equation  
                              • Analyze the relationship between two variables and develop forecasts for values outside the data set  
                              • Perform a regression analysis using Excel and interpret the output |
| Module 5              | Multiple Regression                                                     | • Estimate the relative predictive power of different combinations of variables by performing and interpreting a multiple variable regression analysis using Excel  
                              • Expand the range of your analysis by using dummy and lagged variables |

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