



BAKER COLLEGE
STUDENT LEARNING OUTCOMES

BUS4050 Advanced Business Analytics

3 Semester Hours

Student Learning Outcomes & Enabling Objectives

1. Demonstrate the necessary base knowledge and skills needed for effective application of advanced business analytics
 - a. Explain the role of big data in enterprise wide business performance management and how business analytics and business intelligence create and direct organizational strategy.
 - b. Analyze each element of the business analytics ecosystem: infrastructure, tools, and output.
 - c. Compare and contrast the different types of data, sources of data, types of data analysis (parametric and non-parametric), types of sampling, and different types of research.
 - d. Distinguish the differences between data analysis, modeling, and visualization tools to select the right one for the business situation.
 - e. Differentiate between business analytics applications such as forecasting, predictive analytics, risk modeling using multivariate models such as Monte Carlo Simulation, and monitor/control
2. Develop an advanced business analytics project that uses data within the context of key business decisions.
 - a. Build a research matrix to move from a specific business problem or opportunity through each step in the research cycle to the sources of data.
 - b. Prepare research questions and testable hypotheses to, address specific business problems and/or opportunities.
 - c. Collect, clean, and prepare relevant data that are based on the research matrix.
3. Produce advanced data analytics projects that include both the data analytics and the supporting data visualization.
 - a. Design a user configurable descriptive analytics dashboard to summarize and simplify complex data models.

- b. Compose a Monte Carlo simulation to identify organizational risk.
 - c. Develop a predictive analytics model that uses data to describe likely organizational outcomes.
 - d. Create a prescriptive analytics model that uses data to recommend the best decisions and courses of action.
 - e. Evaluate the prescriptive analytics data model for potential ethical concerns.
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These SLOs are approved for experiential credit.

Effective: Fall 2020