

Book

Render, B., Stair, R. M., Hanna, M. E., & Hale, T.S. (2023). *Quantitative analysis for management*. (14th Edition). Pearson. 9780137043593

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Week 1 - Inventory Control**Activity 1: Module 1 Discussion Board**

Consider a time at work when you experienced a supply shortage or stockout.

Describe the scenario that led to the supply issue. Based on the reading, which of the inventory control functions had the most impact on your supply challenge? How can JIT Principles be used to avoid similar challenges in the future.

Outcomes

1. Assess how inventory control models can create competitive advantages in business

Week 2 Quantitative analysis and probability concepts**Activity 2: Module 2 Discussion Board.**

Assume you were given a data set and asked to validate the results of a market analysis that was conducted by your department.

What factor would you look for to determine the variables to be used in a research problem or project? When should you use discrete variables? When should you use continuous variables?

Respond to your fellow students' questions and evaluations, and whether you agree or disagree, and why.

Outcomes

1. Assess linear unbiased estimators for simple and multiple regression models when addressing business challenges.

Week 3 Decision Analysis and forecasting

Activity 4: Module 3 Discussion Board

The quality of a decision depends on the level of knowledge or information a person has about a situation.

What are some of the concerns when making decisions in the three decision making environments? What action(s) can you take to address the concerns.

Outcomes

1. Evaluate decision analysis principles and forecast models when addressing business challenges.

Week 4 Regression Analysis

Activity 6: Module 4 Discussion Board.

Correlational studies describe the relationship between two variables. In its simplest form, managers must consider how one variable impacts the other.

How can a correlational analysis be used in and benefit an organization?

Respond to your fellow students' questions and evaluations, and whether you agree or disagree, and why.

Outcomes

1. Evaluate the results of Regression and Correlation Analysis for a business problem.

Week 5 Network models, Queuing, and Simulations

Activity 8: Module 5 Discussion Board (30 points)

Consider a time when you were given a large project or task to complete that required modeling or simulation.

Describe the project and the type of modeling you used. Based on the reading, do you believe linear programming would have been helpful? Why or why not? Could you have used a simulation? What is an advantage and disadvantage of using a simulation?

Respond to your fellow students' questions and evaluations, and whether you agree or disagree, and why.

Outcomes

1. Argue the benefits of using a quantitative data analysis strategy to answer a business research question.

Week 6 Linear Program

Activity 10: Module 6 Discussion Board

The text provides five applications for linear programming. Provide a personal example based on one of the applications discussed in the reading. What business area in your profession would benefit from linear programming? Why?

Outcomes

1. Argue the benefits of using linear programming analysis strategy to answer a business research question.

Week 7 Project Management:

Activity 12: Module 7 Discussion Board

Project managers use PERT to determine the appropriate actions to balance cost and schedule.

How can PERT and CPM be used in an organization? Provide an example and discuss some of the challenges the organization has experienced with PERT and CPM?

Outcomes

1. Evaluate the benefits of using project management to address business problems.

Week 8 Reflective research summary

Activity 13: Module 8 Discussion Board

We have all made decisions based on our gut feeling at some point. Yet we know that we can add strength to our decisions by quantifying them with data.

What aspect of quantitative research methods do you feel you have become more comfortable with because of the class? What are the implications of this for determining how you will leverage quantitative methods to address business problems?

Outcomes

1. Evaluate and formulate appropriate quantitative research methods to address business situations.