This course supports the assessments for Quantitative Analysis for Business. The course covers 3 competencies and represents 6 competency units.

Introduction

Overview
This course covers decision-making models, including simulation models, linear programming models, and inventory models; the development of project schedules using the PERT/CPM (Program Evaluation and Review Technique/Critical Path Method); and decision making analysis.

You have made many decisions in your lifetime and used information to help guide your choices. Hence, you have a wealth of experience that you can draw on to help you in your study of quantitative analysis. You will be able to compare your "casual" methods of decision analysis with the best-practice, "formal" methods you will learn about in this course of study. However, quantitative analysis involves a considerable amount of technical knowledge of statistics. Learning statistics requires a lot of practice to master.

Watch the following welcome video for an introduction to this course:

Note: To download this video, right-click the following link and choose "Save as...": download video.

Competencies
This course provides guidance to help you demonstrate the following 3 competencies:

- **Competency 309.3.1: Decision-Making Models**
  The graduate uses optimizing models and other models as aids for making more informed decisions.

- **Competency 309.3.2: PERT/CPM Techniques**
  The graduate correctly applies PERT/CPM techniques to project management tasks.

- **Competency 309.3.3: Expected Value Decision Analysis**
  The graduate uses expected value concepts as decision-making tools.

Course Instructor Assistance
As you prepare to demonstrate competency in this subject, remember that course instructors stand ready to help you reach your educational goals. As subject matter experts, mentors enjoy and take pride in helping students become reflective learners, problem solvers, and critical thinkers. Course instructors are excited to hear from you and eager to work with you.

Successful students report that working with a course instructor is the key to their success. Course instructors are able to share tips on approaches, tools, and skills that can help you apply the content you're studying. They also provide guidance in assessment preparation strategies and troubleshoot areas of deficiency. Even if things don't work out on your first try,
course instructors act as a support system to help you prepare for another attempt. You should expect to work with course instructors for the duration of your coursework, and you are encouraged to contact them as soon as you begin. Course instructors are fully committed to your success!

You can find course instructor contact information on the upper right side of the course.

Preparing for Success

The information in this section is provided to detail the resources available for you to use as you complete this course.

Learning Resources

The learning resources listed in this section are required to complete the activities in this course. For many resources, WGU has provided automatic access through the course. However, you may need to enroll manually in, or independently acquire, other resources. Read the full instructions provided to ensure that you have access to all of your resources in a timely manner.

Getting Started

The following information should help you as you begin this course.

- QAT1 Frequently Asked Questions (general information)
- QAT1 Getting Started Video

Automatically Enrolled Resources

You will be automatically enrolled at the activity level for the following learning resources. Simply click on the links provided in the activities to access the learning materials.

VitalSource E-Texts

The following textbooks are available to you as e-texts within this course of study. You will be directly linked to the specific readings required within the activities that follow.


Note: This e-text is available to you as part of your program tuition and fees, but you may purchase a hard copy at your own expense through VitalSource or a retailer of your choice. If you choose to purchase the text from a retailer, please use the ISBN listed to ensure that you receive the correct edition.

Directions for purchasing a printed text from VitalSource:

1. Access the text using the course links.
2. Click on the Main Menu Icon in the upper left corner.
3. Click Print on Demand
4. If your text is available, it will be listed.
5. Click on the text and follow the prompts for purchasing the book.
For more information, review the Print on Demand Option for VitalSource Texts: Help documentation.

SkillSoft
You will access SkillSoft items at the activity level within this course of study. For more information on accessing SkillSoft items, please see the "Accessing SkillSoft Learning Resources" page.

Minimum Technical Requirements

Obtain a Calculator
You will need a financial calculator or access to spreadsheet software, such as Microsoft Excel, for computational problems throughout this course. The recommended financial calculator is the Texas Instruments BA-II Plus. You may only use an approved financial calculator during the pre-assessment and assessment for this course. You are unable to use Excel during the assessments.

Topics and Pacing
This outline suggests a weekly structure to pace your completion of learning activities. It is provided as a suggestion and does not represent a mandatory schedule. Follow these guidelines carefully to complete the course in the suggested timeframe.

Week 1
- Concepts of Inventory Models
- QAT1: Task 3 Determining Order & Lot Size

Week 2
- Concepts of Expected Value Decision Analysis
- QAT1: Task 5 Improving Profits

Week 3
- Concepts of Simulation
- QAT1: Task 1 Simulation Trials

Week 4
- Concepts of PERT/CPM Techniques
- QAT1: Task 4 PERT Chart & CPM Techniques

Week 5
- Concepts of Linear Programming and Integer Linear Programming
- QAT1: Task 2 Optimizing Production
Week 6

- Revise and resubmit any tasks needed

**Additional Preparation**

These additional preparations will help you as you complete this course.

**QAT1 Recordings and Resources**

The course instructors have provided many resources for this course in QAT1 Recordings and Resources. In particular, look for and check out the following resources:

- Recordings for tasks
- QAT1 cohort and QAT1 in a day information
- Calendar of Live Sessions
- Need help?
- Meet the Course Instructors

**Supplemental Math Review**

If it has been a while since you took a math class or you simply find that you need additional study material, please use the Supplemental Review document to access various short videos on math concepts. These videos are not required but are an excellent source of review information.

**Decision-Making Models I**

These activities will introduce you to the concepts associated with decision-making models. In this subject you will study inventory models. Managing inventory efficiently is one of the most important determinants of profitability in many firms. Modern companies try to minimize the amount of inventory they carry in order to keep costs low, but must be careful to avoid stock-outs. Understanding these models will help you develop the skills to manage any business in which inventory costs are important to profitability.

**Concepts of Inventory Models**

This section provides an introduction to inventory models. The economic order quantity (EOQ) model calculates the order quantity that minimizes the company's annual holding cost plus annual ordering cost. Cycle time and demand are also considered.

This topic addresses the following competency:

- **Competency 309.3.1: Decision-Making Models**
  The graduate uses optimizing models and other models as aids for making more informed decisions.

This topic addresses the following learning objectives:
● Describe where inventory costs occur.
● Demonstrate the economic order quantity (EOQ) model.
● Develop total cost models for specific inventory systems.
● Demonstrate the total cost model to make how-much-to-order and when-to-order decisions.
● Extend the basic approach of the EOQ model to inventory systems involving production lot sizes, planned shortages, and quantity discounts.
● Make inventory decisions for single-period inventory models.
● Make order quantity and reorder point decisions when demand is described by a probability distribution.
● Apply lead time demand distributions to determine acceptable service levels.

Inventory Models

Read the following sections of Chapter 6 "Inventory Control Models" in Quantitative Analysis for Management and answer the problems at the end of the chapter:

- Section 6.1 ("Introduction")
- Section 6.2 ("Importance of Inventory Control")
- Section 6.3 ("Inventory Decisions")
- Section 6.4 ("Economic Order Quantity: Determining How Much to Order")
- Section 6.5 ("Reorder Point: Determining When to Reorder")
- Section 6.6 ("EOQ Without the Instantaneous Receipt Assumption")
- Section 6.7 ("Quantity Discount Models")

After reading the chapter, you should be able to answer the following questions:

- Why are inventory costs an important consideration for managers in making good inventory policy decisions?
- What is the economic order quantity (EOQ) model?
- How do you develop total cost models for specific inventory systems?
- How does the total cost model influence decisions on how-much-to-order and when-to-order?
- When do you apply the basic approach of the EOQ model to inventory systems?
- How do you make inventory decisions for single-period inventory models?
- How do you make order quantity and reorder point decisions when demand is described by a probability distribution?
- How are lead time demand distributions and acceptable service levels associated?

Connecting Terms

Think about the glossary listed at the end of chapter 6 "Inventory Control Models" of Quantitative Analysis for Management. Prepare a set of review/flash cards (one for each term) and on each card identify the term, its definition, and a short statement of how that term relates to inventory model concepts.

Check Your Understanding of Inventory Models

Complete the following problems in the "Discussion Questions and Problems" area at the end of
Chapter 6 “Inventory Control Models” of Quantitative Analysis for Management.

- Problems 18, 20, 24, and 26

Check your answers in Appendix G (“Solutions to Selected Problems”) at the end of the text. Go back and review concepts in the chapter as needed.

Managing for Asset Control

Complete the following SkillSoft Module:

- Managing for Asset Control

Review the Practice Study Quizzes

Complete the following study quizzes:

- QAT1 Task 3 Study Quizzes

Additional Recordings and Resources

Review the following resources:

- QAT1 Task 3 Study Guide
- QAT1 Task 3 Frequently Asked Questions
- QAT1 Task 3 Panopto Recordings
- Help with Video Quality

QAT1 Task 3

Now that you have completed your study of inventory models, it is time to for you to apply your knowledge by completing the performance task.

This topic addresses the following competency:

- Competency 309.3.1: Decision-Making Models
  The graduate uses optimizing models and other models as aids for making more informed decisions.

Complete: Task 3 Performance Task

Complete the following task in Taskstream:

- QAT1: Task 3 Determining Order & Lot Size

For details about this performance assessment, see the "Assessment" tab in this course.

Expected Value Decision Analysis
Decision analysis is used to determine a recommended decision alternative or an optimal decision strategy when a decision maker is faced with an uncertain and risk-filled pattern of future events. The goal of decision analysis is to identify the best decision alternative or the optimal decision strategy given information about the uncertain events and the possible payoffs.

These activities will introduce you to the concepts associated with expected value decision analysis. Every manager faces decisions involving uncertainty and risk. Expected value decision analysis allows the manager to make optimal choices given the uncertainty and risk associated with different alternatives.

**Concepts of Expected Value Decision Analysis**

In this section you will learn how to calculate the expected value of different decision alternatives, calculate the expected value of perfect information, and determine the decision alternative with the most favorable total expected value.

This topic addresses the following competency:

- **Competency 309.3.3: Expected Value Decision Analysis**
  The graduate uses expected value concepts as decision-making tools.

The topic addresses the following learning objectives:

- Describe a problem situation in terms of decisions to be made, chance events and consequences.
- Analyze a simple decision analysis problem from both a payoff table and decision tree point of view.
- Determine the potential value of additional information.
- Use new information and revised probability values in the decision analysis approach to problem solving.
- Explain what a decision strategy is.
- Evaluate the contribution and efficiency of additional decision making information.

**Understanding Decision Analysis, Utility and Decision Making, and Other Considerations**

Read the following chapter of *Quantitative Analysis for Management* and answer the problems at the end of the chapter assigned below:

- **Chapter 3 ("Decision Analysis")**

After reading the chapter, you should be able to answer the following questions:

- How is a simple decision analysis problem related to payoffs and a payoff table? How do we use it in a decision tree point of view?
- What is additional information? What is its potential value?
- What is a decision strategy?
- How does additional information affect efficiency?
- How does a lottery play a role in helping a decision maker assign utility values?
Why would risk-avoiding and risk-taking decision makers assign different utility values in the same decision making situation?

Connecting Terms I

Think about the glossary listed at the end of Chapter 3 ("Decision Analysis") of Quantitative Analysis for Management. Prepare a set of review/flash cards (one for each term) and on each card identify the term, its definition, and a short statement of how that term relates to decision analysis, utility and decision making.

Check Your Understanding of Decision Analysis

Review the solved problems 3-1 through 3-4 and complete the following problems in the "Discussion Questions and Problems" area at the end of Chapter 3 ("Decision Analysis") of Quantitative Analysis for Management:

- Problems 18, 24, 34 and 40

Check your answers in Appendix G ("Solutions to Selected Problems") at the end of the text. Go back and review concepts in the chapter as needed.

Understanding Discrete Random Variables

Review the following sections in Chapter 2 ("Probability Concepts and Applications" of Quantitative Analysis for Management:

- Section 2.8 ("Random Variables")
- Section 2.9 ("Probability Distributions")

After reviewing these sections, you should be able to answer the following questions:

- What are the concepts of a discrete random variable and a probability distribution?
- How do you develop a discrete probability distribution?

Review the Practice Study Quizzes

Complete the following study quizzes:

- QAT1 Task 5 Study Quizzes

Additional Recordings and Resources

Review the following resources:

- QAT1 Task 5 Study Guide
- QAT1 Task 5 Frequently Asked Questions
- QAT1 Task 5 Panopto Recordings
- Help with Video Quality

QAT1 Task 5

Now that you have completed your study of decision analysis and the application of utility to
decision making, it is time for you to apply your knowledge by completing the performance task.

This topic addresses the following competency:

- **Competency 309.3.3: Expected Value Decision Analysis**
  The graduate uses expected value concepts as decision-making tools.

**Complete: Task 5 Performance Task**

Complete the following task in Taskstream:

- QAT1: Task 5 Improving Profits

For details about this performance assessment, see the "Assessment" tab in this course.

**Decision-Making Models II**

These activities will introduce you to the concepts associated with decision-making models. The first topic you will study is simulation. Simulation allows managers to take complex systems and model them so that they can experiment with different strategies and outcomes. Simulations produce results that are both insightful and easily communicated, providing other managers confidence in the results. Understanding simulation can help you progress in your career by allowing you to analyze a wide range of decisions in a rigorous and accurate manner.

The term *decision-making models* refers to quantitative concepts which include simulation; linear programming; integer linear programming; inventory models; waiting line models; and transportation, assignment, and transshipment problems.

**Concepts of Simulation**

Simulation models are used to analyze a variety of complex and dynamic processes. Simulations are often used when managers face a variety of possible outcomes with different probabilities. Simulations can be used in areas such as inventory modeling, production planning, and budgeting to improve business decision making.

This topic addresses the following competency:

- **Competency 309.3.1: Decision-Making Models**
  The graduate uses optimizing models and other models as aids for making more informed decisions.

This section addresses the following learning objectives:

- Explain what a simulation is and how it aids in the analysis of a problem.
- Recognize why simulation is a significant problem-solving tool.
- Identify the important role probability distributions and random numbers play in implementing simulation models.
• Apply the concepts of a discrete random variable and a probability distribution to simulation.
• Develop a discrete probability distribution based on a given simulation.

Understanding Simulation

Read the following chapter of *Quantitative Analysis for Management*:

• Chapter 14 ("Simulation Modeling")

After reading the chapter, you should be able to answer the following questions:

• What is a simulation and how does it aid in the analysis of a problem?
• Why is simulation a significant problem-solving tool?
• What roles do probability distributions and random numbers play in implementing simulation models?

Connecting Terms I

Think about the glossary listed at the end of Chapter 14 ("Simulation Modeling") of *Quantitative Analysis for Management*. Prepare a set of review/flash cards (one for each term) and on each card identify the term, its definition, and a short statement of how that term relates to simulation concepts.

Check Your Understanding of Simulation

Review the solved problems starting on page 561.

Complete the following problems in the "Discussion Questions and Problems" area at the end of Chapter 14 ("Simulation Modeling") of *Quantitative Analysis for Management*:

• Problems 14, 18, 19 (pg. 565)

Check your answers in Appendix G ("Solutions to Selected Problems") at the end of the text. Go back and review concepts in the chapter as needed.

Understanding Discrete Random Variables

Read the following Sections in Chapter 2 ("Probability Concepts and Applications") of *Quantitative Analysis for Management*:

• Section 2.8 ("Random Variables")
• Section 2.9 ("Probability Distributions") (starting on pg. 33)

After reading the chapter, you should be able to answer the following questions:

• What are discrete random variables and probability distributions?
• How do you develop a discrete probability distribution?

Connecting Terms II
Think about the key terms listed in Sections 2.8 and 2.9 of Chapter 2 ("Probability Concepts and Applications") of Quantitative Analysis for Management. Prepare a set of review/flash cards (one for each term) and on each card identify the term, its definition, and a short statement of how the term relates to the concept of a discrete random variable.

**Determining Properties and Applications of Probability Distributions**

Complete the following SkillSoft Module:

- Properties and Applications of Probability Distributions

Review the Practice Study Quizzes

Complete the following study quizzes:

- QAT1 Task 1 Study Quizzes

**Additional Recordings and Resources**

Review the practice resources:

- QAT1 Task 1 Study Guide
- QAT1 Task 1 Frequently Asked Questions
- QAT1 Task 1 Panopto
- Help with Video Quality

**QAT1 Task 1**

Now that you have completed your study of the simulation concept it is time to for you to apply your knowledge by completing the performance task.

This topic addresses the following competency:

- Competency 309.3.1: Decision-Making Models
  The graduate uses optimizing models and other models as aids for making more informed decisions.

**Complete: Task 1 Performance Task**

Complete the following task in Taskstream:

- QAT1: Task 1 Simulation Trials

For details about this performance assessment, see the "Assessment" tab in this course.

**PERT/CPM Techniques**
The activities for this subject will introduce you to the concepts associated with PERT/CPM techniques. These techniques are critical to planning, scheduling and controlling complex projects that consist of multiple tasks. Business organizations rely on efficient project management to produce outcomes on time and under budget. Understanding PERT/CPM techniques will help you manage projects effectively throughout your career.

The term PERT/CPM refers to the Program Evaluation and Review Technique and the Critical Path Model, respectively. In many situations, managers are responsible for planning, scheduling, and controlling projects that consist of numerous separate tasks performed by a variety of departments and individuals. These managers must schedule and coordinate the various activities so that the entire project is completed on time.

Concepts of PERT/CPM Techniques

In this section, you will study the program evaluation and review technique (PERT) and the critical path method (CPM) of project scheduling. At the end, you will be able to calculate the expected completion time for project activities, identify the critical path, determine the amount of slack in the system, and calculate scheduled start times and maximum reduction time.

This topic addresses the following competency:

- **Competency 309.3.2: PERT/CPM Techniques**
  The graduate correctly applies PERT/CPM techniques to project management tasks.

This topic addresses the following learning objectives:

- Demonstrate PERT/CPM for project scheduling.
- Define a project in terms of a network of activities.
- Compute the critical path and the project completion time.
- Convert optimistic, most probable and pessimistic time estimates into expected activity time estimates.
- Compute the probability of the project being completed by a specific time with uncertain activity times.
- Explain the concept of crashing.
- Formulate the crashing problem as a linear programming model.
- Schedule and control project costs with PERT/Cost.

Understanding Project Scheduling PERT/CPM

Read the following chapter of *Quantitative Analysis for Management*:

- **Chapter 12 ("Project Management")**

After reading the chapter, you should be able to answer the following questions:
- What is the role of PERT/CPM for project scheduling?
- How can you define a project in terms of a network of activities?
- How do you compute the critical path and the project completion time and convert optimistic, most probable, and pessimistic time estimates into expected activity time estimates?
- How do you compute the probability of the project being completed by a specific time given uncertain activity times?
- What is the concept of crashing and when is it needed?
- How do you formulate the crashing problem as a linear programming model?
- How does a manager schedule and control project cost with PERT/CPM?

Connecting Terms I

Think about the glossary listed at the end of Chapter 12 ("Project Management") of Quantitative Analysis for Management. Prepare a set of review/flash cards (one for each term) and on each card identify the term, its definition, and a short statement of how that term relates to project scheduling PERT/CPM.

Check Your Understanding of Project Scheduling PERT/CPM

Complete the following problems in the "Discussion Questions and Problems" area at the end of Chapter 12 ("Project Management") of Quantitative Analysis for Management:

- Problems 14, 18, 20, 28, and 31

Check your answers in Appendix G ("Solutions to Selected Problems") at the end of the text. Go back and review concepts in the chapter as needed.

Normal Probability Distribution

Read the following section in Chapter 2 ("Probability Concepts and Applications") of Quantitative Analysis for Management:

- Section 2.11 ("The Normal Distribution")

After reading the chapter, you should be able to answer the following questions:

- What are concepts of a normal distribution and a probability distribution?
- How do you apply the concept of a normal distribution to Z-score calculation?

Connecting Terms II

Think about the key terms listed in section 2.11 of Chapter 2 ("Probability Concepts and Applications") of Quantitative Analysis for Management. Prepare a set of review/flash cards (one for each term) and on each card identify the term, its definition, and a short statement of how that term relates to the normal probability distribution concept.

Project Scheduling: PERT/CPM

Complete the following SkillSoft Module:
• **Project Scheduling**

**Review the Practice Study Quizzes**

Complete the following study quizzes:

• **QAT1 Task 4 Study Quizzes**

**Additional Recordings and Resources**

Review the following resources:

• **QAT1 Task 4 Study Guide**
• **QAT1 Task 4 Frequently Asked Questions**
• **QAT1 Task 4 Panopto Recordings**
• **Help with Video Quality**

**QAT1 Task 4**

Now that you have completed your study of the project scheduling PERT/CPM, it is time to for you to apply your knowledge by completing the performance task.

**This topic addresses the following competency:**

• **Competency 309.3.2: PERT/CPM Techniques**
  The graduate correctly applies PERT/CPM techniques to project management tasks.

**Complete: Task 4 Performance Task**

Complete the following task in Taskstream:

• **QAT1: Task 4 PERT Chart & CPM Techniques**

For details about this performance assessment, see the "Assessment" tab in this course.

**Decision-Making Models III**

These activities will introduce you to concepts associated with decision-making models. In this section, you will study linear programming. Linear programming is one of the most heavily used methods in quantitative analysis. The goal of linear programming is to maximize profit or minimize cost subject to a number of constraints. Linear programming will help you analyze a wide variety of managerial decisions in your career, particularly in operations management, supply chain management, and logistics.

**Concepts of Linear Programming and Integer Linear Programming**

Decision-making models are widely used to help managers make optimal decisions. Integer linear programming is one of the most important tools for analyzing problems such as transportation, assignment, and transshipment problems. Linear programming allows the manager to solve for a constrained maximum, which is the optimal action given the constraints
This topic addresses the following competency:

- **Competency 309.3.1: Decision-Making Models**
  The graduate uses optimizing models and other models as aids for making more informed decisions.

This topic addresses the following learning objectives:

- Describe the kinds of problems linear programming can be used to solve.
- Develop linear programming models for simple problems.
- Identify the special features of a model that make it a linear programming model.
- Solve two variable linear programming models by the graphical solution procedure.
- Explain the importance of constraints in obtaining the optimal solution.
- Solve small integer linear programs with a graphical solution procedure.

**Introduction to Linear Programming**

Read the following sections of *Chapter 7 ("Linear Programming Models: Graphical and Computer Methods")* in *Quantitative Analysis for Management*:

- Section 7.1 ("Introduction")
- Section 7.2 ("Requirements of a Linear Programming Problem")
- Section 7.3 ("Formulating LP Problems")
- Section 7.4 ("Graphical Solution to an LP problem")
- Section 7.7 ("Four Special Cases in LP")

After reading the chapter, you should be able to answer the following questions:

- How do you develop linear programming models for simple problems?
- What are the special features of a model that make it a linear programming model?
- How do you use constraints to solve two variable linear programming models by the graphical solution procedure?

**Connecting Terms I**

Think about the glossary listed at the end of the *Chapter 7 ("Linear Programming Models: Graphical and Computer Methods")* of *Quantitative Analysis for Management*. Prepare a set of review/flash cards (one for each term) and on each card identify the term, its definition, and a short statement of how that term relates to linear programming concepts.

**Check Your Understanding of Linear Programming**

Review solved problems on pages 286-290 and complete the following problems in the "Discussion Questions and Problems" area at the end of *Chapter 7 ("Linear Programming Models: Graphical and Computer Methods")*.
Models: Graphical and Computer Methods) of Quantitative Analysis for Management:

- Problems 14, 16, 18, 26, and 28

Check your answers in Appendix G ("Solutions to Selected Problems") at the end of the text. Go back and review concepts in the chapter as needed.

**Integer Linear Programming**

Read the following chapter of Quantitative Analysis for Management and answer the assigned problems at the end of the chapter.

- Chapter 10 ("Integer Programming, Goal Programming, and Nonlinear Programming")

After reading section 10.2 ("Integer Programming") you should be able to answer the following questions:

- How do you determine the types of situations where integer linear programming problem formulations are desirable?
- How can you solve small integer linear programs with a graphical solution procedure?

**Connecting Terms II**

Think about the key terms listed in Chapter 10 ("Integer Programming, Goal Programming, and Nonlinear Programming") of Quantitative Analysis for Management. Prepare a set of review/flash cards (one for each term) and on each card identify the term, its definition, and a short statement of how that term relates to integer linear programming concepts.

**Check Your Understanding of Integer Linear Programming**

Complete the following problems in the "Discussion Questions and Problems" area at the end of Chapter 10 ("Integer Programming, Goal Programming, and Nonlinear Programming") of Quantitative Analysis for Management:

- Problems 10 and 12

Check your answers in Appendix G ("Solutions to Selected Problems") at the end of the text. Go back and review concepts in the chapter as needed.

**Review the Practice Study Quizzes**

Complete the following study quizzes:

- QAT1 Task 2 Study Quizzes

**Additional Recordings and Resources**

Review the following resources:
Now that you have completed your study of the linear programming and integer linear programming, it is time for you to apply your knowledge by completing the performance task.

This topic addresses the following competency:

- **Competency 309.3.1: Decision-Making Models**
  The graduate uses optimizing models and other models as aids for making more informed decisions.

**Complete: Task 2 Performance Task**

Now that you have completed your study of the linear programming and integer linear programming concepts, it is time for you to apply your knowledge by completing the performance task.

Complete the following task in Taskstream:

- QAT1: Task 2 Optimizing Production

For details about this performance assessment, see the "Assessment" tab in this course.

**Final Steps**

Congratulations on completing the activities in this course! You are now prepared to complete the associated assessment. If you have not already completed and submitted the five (5) tasks (performance assessments), you should do so now.

- QAT1: Task 3 Determining Order & Lot Size
- QAT1: Task 5 Improving Profits
- QAT1: Task 1 Simulation Trials
- QAT1: Task 4 PERT Chart & CPM Techniques
- QAT1: Task 2 Optimizing Production