



This course supports the assessment for Operations Management. The course covers 6 competencies and represents 3 competency units.

## Introduction

### Overview

This course focuses on the strategic importance of operations management to overall performance. This course also emphasizes principles of supply-chain management from manufacturing goods to retail services. You will examine the various planning, control, and decision-making tools and techniques of the operations function.

### Getting Started

Welcome to Operations Management! Operations Management is usually a new concept for many students; many have worked as managers of human capital but have limited experience with quality and supply-chain management. There are six topics of study within the course. Within each topic you will read text, view multimedia presentations, complete quizzes, and practice activities. Additional videos are available in the Course Tips to help you prepare for success.

Note: We recommend you wait to take the pre-assessment until after you have learned the content in this course. If you feel you already have a solid background in the content, discuss the timing of the pre-assessment with your mentor. Competency will be demonstrated by successfully completing an objective assessment.

### Competencies

This course provides guidance to help you demonstrate the following 6 competencies:

- **Competency 3016.1.1: Quality Management Methods**  
The graduate applies quality management methods for continuous improvement in an organization.
- **Competency 3016.1.2: Capacity Planning, Location Analysis**  
The graduate designs capacity, process, layout, and location strategies.
- **Competency 3016.1.3: Work System Design and Scheduling**  
The graduate utilizes process and method analysis, measurement techniques, and scheduling concepts to design the work systems design.
- **Competency 3016.1.4: Operating Efficiency**  
The graduate employs just-in-time and lean systems to improve operating efficiency.
- **Competency 3016.1.5: Supply Chain**  
The graduate organizes the supply chain to create competitive advantage for an organization.
- **Competency 3016.1.6: Management and Planning**  
The graduate applies operations and inventory management requirements and concepts to achieve operating objectives.



## **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 guide you through the revision process. 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!

## **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 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.

#### **Automatically Enrolled Resources**

You can access the learning resources listed in this section by clicking on the links provided throughout the course. You may be prompted to log in to the WGU student portal to access the resources.

#### **WileyPLUS**

WileyPLUS is a research-based online environment for effective teaching and learning. WileyPLUS includes a full digital text, study resources, auto-graded assessment, and grade book. All of the content in WileyPLUS, including the rich multimedia resources, is mapped to learning objectives. WileyPLUS reports students' grades, progress, and results by learning objective for each course, which mentors and students can view.

The following WileyPLUS e-text will be used in this course:

- Reid, R.D. & Sanders, N.R. (2012). *Operations management* (5th ed.). Hoboken, NJ: John Wiley & Sons. ISBN: 9781118122679.

#### **Navigating WileyPLUS**

The links provided throughout this course of study will take you to the WileyPLUS assignment page. The links in the assignment page give you access to the different assignments that you



will need to complete for this course.

### **Example WileyPLUS Activity List**

- Chapter 05 (a) Pre-Chapter Quiz
- Chapter 05 (b) Readings
- Chapter 05 (c) Videos
- Chapter 05 (d) Post-Chapter Quiz
- Chapter 05 Homework
- Chapter 05 Practice

Throughout the course of study, some assignments only require you to read, view, and complete specific sections of that assignment. These specific sections (ex., Cost of Quality) will be sub-bulleted like in the example below.

- Chapter 5 (a) Pre-Chapter Quiz
- Chapter 5 (b) Readings ("Total Quality Management")
- Chapter 5 (c) Videos
  - "Quality Management, Quality Service"
- Chapter 5 Practice
- Chapter 5 (d) Post-Chapter Quiz
- Chapter 5 Homework

### **Other Learning Resources**

You will use the following learning resources for this course.

#### **WGU Library Articles**

This course utilizes resources via the WGU Library, with articles available for you to open and download. For instructions on how to access WGU Library articles, see the "[Accessing WGU Library Articles](#)" page.

The following WGU Library articles will be used in this course:

- DeBaylo, P.W. (1999). [Ten reasons why the Baldrige model works](#). *Journal for Quality & Participation*, 22(1), 24.

### **Topics and Pacing**

The topics and pacing guide 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 the pacing guide carefully to complete the course in the suggested timeframe.

Week 1

- Quality Management Methods



## Week 2

- Capacity Planning, Location Analysis
- Process Selection and Layout

## Week 3

- Work-System Design and Scheduling

## Week 4

- Operating Efficiency

## Week 5

- Supply Chain

## Week 6

- Management
- Planning
- Final Steps

# Operations Management

Operations management is the business function that plans, organizes, coordinates, and controls the resources needed to produce a company's goods and services. It includes quality management by establishing and measuring against organizational standards.

## Quality Management Methods

Customer-defined quality can have a powerful impact on business. For this reason, many competitive firms continually increase their quality standards. Quality management tools such as Six Sigma, Lean, and Agile focus on identifying root causes of quality problems throughout the entire organization and correcting them at the source.

This topic addresses the following competency:

- **Competency 3016.1.1: Quality Management Methods**  
The graduate applies quality management methods for continuous improvement in an organization.

This topic highlights the following objectives:

- Describe total quality management.
- Explain how to select the appropriate standard or combination of quality standards for an organization.
- Apply quality management tools to identify and analyze quality problems.



- Explain how total quality management affects each of the functional areas of an organization.
- Explain the causes of variation.
- Explain the meaning of process capability and the process capability index.
- Explain the concept of Six Sigma.

### **Chapter 5: Total Quality Management**

Chapter 5 focuses on the meaning of total quality management (TQM). You should be able to define TQM and identify the costs of quality.

As you complete the listed material below, pay attention to the following key points:

- the evolution of TQM
- quality awards and standards
- TQM philosophy
- tools for identifying and solving quality problems

Before studying this chapter, you should know or review the following concepts:

- trends in total quality management (TQM)
- quality as a competitive priority

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 5 ("Total Quality Management"):

- Chapter 5 (a) Pre-Chapter Quiz
- Chapter 5 (b) Readings ("Total Quality Management")
- Chapter 5 (c) Videos
  - "Supplier Quality Management"
- Chapter 5 (d) Post-Chapter Quiz
- Chapter 5 Homework
- Chapter 5 Practice

Read the following article, available in the online library:

- DeBaylo, P.W. (1999). [Ten reasons why the Baldrige model works](#). *Journal for Quality & Participation*, 22(1), 24.

### **Chapter 6: Statistical Quality Control**

The body of knowledge for the quantitative assessment of quality control contains several powerful statistical tools and processes. The overriding objective of statistical quality control is to identify when a variation in a process causes reduced quality or satisfaction and increases cost or waste. These aberrations must be managed, and statistical quality control becomes an important tool in accomplishing this objective.

As you complete the listed material below, pay attention to the following key points:



- sources of variation
- process capability
- Six Sigma quality

Before studying this chapter you should know or review the following concepts:

- quality as a competitive priority
- total quality management (TQM) concepts

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 6 ("Statistical Quality Control"):

- Chapter 6 (a) Pre-Chapter Quiz
- Chapter 6 (b) Readings ("Statistical Quality Control")
- Chapter 6 (c) Videos
  - "Game Quality Testing"
- Chapter 6 (d) Study Aids
  - Flashcards
  - PowerPoint Review
- Chapter 6 (e) Post-Chapter Quiz
- Chapter 6 Homework
- Chapter 6 Practice

## Capacity Planning, Location Analysis

Matching the capacity of a business with customer demand can be a challenge. Having too much capacity leads to excess cost due to idle facilities, workers, and equipment. Too little capacity leads to lost sales because the company cannot satisfy customer demands. Location analysis determines the best geographic location for a company's facility.

### Capacity Planning, Location Analysis

Capacity planning is the process of establishing the output rate that can be achieved by a facility. When discussing the capacity of a facility, there are two types of important information to consider:

- the amount of available capacity
- the effectiveness of capacity use.

Facility location is important because of the long-term commitments in buildings and facilities and the sizable financial investment that can have a large impact on operating costs and revenues.

This topic addresses the following competency:

- **Competency 3016.1.2: Capacity Planning, Location Analysis**  
The graduate designs capacity, process, layout, and location strategies.



This topic highlights the following objectives:

- Explain challenges of capacity planning in a hospital setting.
- Select an ideal location for a service company.
- Explain how capacity planning and location influence an organization's operations.
- Explain the steps involved in capacity planning and location analysis.
- Describe the decision support tools used in capacity planning.
- Identify key factors in location analysis.
- Describe the decision support tools used in location analysis.

### **Chapter 9: Capacity Planning and Facility Location**

After reading this chapter you should be able to define capacity planning and identify the relationship between capacity planning and location analysis.

As you complete the listed material below, pay attention to the following key points:

- capacity planning and location analysis
- the relationship between capacity planning and location analysis
- the steps involved in capacity planning and location analysis
- decision-support tools used in location analysis

Before studying this chapter you should know or review the following concepts:

- globalization
- differences between strategic and tactical decisions
- break-even analysis
- qualitative forecasting methods

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 9 ("Capacity Planning and Facility Location"):

- Chapter 9 (a) Pre-Chapter Quiz
- Chapter 9 (b) Readings ("Capacity Planning and Facility Location")
- Chapter 9 (c) Case Studies
  - "Data Tech, Inc."
    - While reading this case, consider the following questions:
      - Did they meet capacity needs?
      - How would you apply this information to your own experiences?
    - Consider discussing your answers with the course instructor.
- Chapter 9 (d) Study Aids
  - Flashcards
  - PowerPoint Review
- Chapter 9 (e) Post-Chapter Quiz
- Chapter 9 Homework
- Chapter 9 Practice



View the following supplemental video:

*Note: View the video in full screen at 720p for best results.*

## **Process Selection and Layout**

Process selection and layout are important considerations in determining a cost-effective production process. Decisions include the selection of materials, equipment, and labor skills that are efficient and affordable. Process-flow analysis is a technique used for evaluating a process in terms of the sequence of steps involved.

This topic addresses the following competency:

- **Competency 3016.1.2: Capacity Planning, Location Analysis**  
The graduate designs capacity, process, layout, and location strategies.

This topic highlights the following objectives:

- Explain various types of operational processes and their characteristics.
- Explain how to use a process flowchart.
- Explain how to use process performance metrics.
- Choose an appropriate type of layout for a given situation.
- Describe the steps involved in designing a process layout.

## **Chapter 3: Product Design and Process Selection**

This material will review process selection, designing processes, and process-performance metrics.

As you complete the listed material below, pay attention to the following key points:

- types of processes and characteristics
- process performance metrics

Before studying this chapter you should know or review the following concepts:

- differences between manufacturing and service organizations
- differences between strategic and tactical decisions
- competitive priorities

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 3 ("Product Design and Process Selection"):

- Chapter 3 (a) Pre-Chapter Quiz
- Chapter 3 (b) Readings ("Product Design and Process Selection")
- Chapter 3 (c) Case Studies
  - "Biddy's Bakery"





- While reading this case, also consider the following questions:
  - What steps should be taken to better estimate sales projections?
  - How would you apply this information to your own experiences?
- Chapter 3 (d) Study Aids
  - Flashcards
  - PowerPoint Review
- Chapter 3 (e) Post-Chapter Quiz
- Chapter 3 Homework
- Chapter 3 Practice

## **Chapter 10: Facility Layout**

This material will review the types of layouts and the steps involved in designing a process.

As you complete the listed material below, pay attention to the following key points:

- different types of layouts
- steps in designing process layouts

Before studying this chapter you should know or review the following concepts:

- the Hawthorne studies and human relations movement
- types of operations and their characteristics
- the load-distance model for location planning
- measuring rectilinear distance

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 10 ("Facility Layout"):

- Chapter 10 (a) Pre-Chapter Quiz
- Chapter 10 (b) Readings ("Facility Layout")
- Chapter 10 (c) Study Aids
  - Flashcards
  - PowerPoint Review
- Chapter 10 (d) Post-Chapter Quiz
- Chapter 10 Homework
- Chapter 10 Practice

## **Work-System Design and Scheduling**

Part of the operations strategy of a company is designing a work system, which includes job design, work measurement, and scheduling.

### **Work-System Design and Scheduling**

Job design details the structure of the job and names the tasks within the structure. Methods analysis details the tasks and how to accomplish the job. Work-measurement techniques are used to set a standard time for a specific job.



This topic addresses the following competency:

- **Competency 3016.1.3: Work System Design and Scheduling**

The graduate utilizes process and method analysis, measurement techniques, and scheduling concepts to design the work systems design.

This topic highlights the following objectives:

- Describe steps involved in method analysis.
- Apply work measurement to estimate time to complete a specific job.
- Design a work system.
- Describe differences between infinite and finite loading for scheduling work.

### **Chapter 11: Work System Design**

As you complete the listed material below, pay attention to the following key points:

- the objectives of each element of work system design
- relevant job design issues
- work-measurement techniques and standards
- compensation systems

Before studying this chapter you should know or review the following concepts:

- competitive priorities
- process selection
- layout types

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 11 ("Total Quality Management"):

- Chapter 11 (a) Pre-Chapter Quiz
- Chapter 11 (b) Readings ("Work System Design")
  - Print and use the Formula Review for reference
- Chapter 11 (c) Case Studies
  - "The Navigator III"
    - While reading this case, also consider the following questions:
      - Although the mean observed time for element 6 for Sam was 1.50 minutes, could the time savings possibly be attributed to process modification in another element?
      - What would need to be done to determine where the time savings occurred?
- Chapter 11 (d) Study Aids
  - Problems (1-20)
- Chapter 11 (e) Animations
  - "Solved Demo Problem 2"
- Chapter 11 Homework



- Chapter 11 Test

## Operating Efficiency

Operating efficiency deals with minimization of waste and maximization of resource capabilities in order to deliver quality products and services to customers.

### Operating Efficiency

Traditional manufacturing operations are push-type systems based on the assumption that it is better to produce goods in advance in order to have products in place when demand occurs. The "just-in-time" (JIT) operation, however, is a pull-type process that emerged as a result of the focus on improving operational efficiency by reducing inventory to the bare minimum and receiving a supply of inventory just when it is needed for a process, thus eliminating holding costs of inventory.

This topic addresses the following competency:

- **Competency 3016.1.4: Operating Efficiency**  
The graduate employs just-in-time and lean systems to improve operating efficiency.

This topic highlights the following objectives:

- Describe the core elements of a just-in-time (JIT) system.
- Describe the relationship between JIT and lean systems.
- Explain the differences between "push" and "pull" production systems.
- Describe the impact of JIT on all functional areas of the company.
- Describe constraints management.

### Chapter 7: Just-In-Time and Lean Systems

This chapter covers the just-in-time (JIT) philosophy, which is to get the correct quantity of goods at the correct place and time.

As you complete the listed material below, pay attention to the following key points:

- JIT, inventory management, inventory holding costs
- efficiency, best practices, continuous improvement, resource planning
- supply-chain management
- constraints-management limitations and alternatives

Before studying this chapter you should know or review the following concepts:

- JIT as a trend in OM
- time as a competitive priority
- total-quality management concepts

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 7 ("Just-in-Time and Lean Systems"):



- Chapter 7 (a) Pre-Chapter Quiz
- Chapter 7 (b) Readings ("Just-in-time and Lean Systems")
- Chapter 7 (c) Study Aids
  - Flashcards
  - PowerPoint Review
- Chapter 7 (d) Post-Chapter Quiz
- Chapter 7 Homework
- Chapter 7 Practice

## **Chapter 15: Scheduling**

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 15 ("Scheduling"):

- Chapter 15 (a) Readings ("Scheduling")
- Chapter 15 (b) Study Aids
  - PowerPoint Review (chart 28)

## **Supplement B: Introduction to Optimization**

Read the following supplement sections in [Operations Management](#):

- Chapter Supplement B Readings

## **Supply Chain**

A supply chain is the network of activities that delivers a finished product or service to the customer. These activities include sourcing raw materials and parts, manufacturing and assembling the products, warehousing, entering and tracking orders, distributing through the channels, and delivering to the customer.

### **Supply Chain**

A company's supply-chain structure has three components:

- external suppliers,
- internal functions of the company, and
- external distributors.

Vertical integration is a measure of how much of the supply chain is owned or operated by the manufacturer. Insourcing-versus-outsourcing decisions involve more than just evaluating costs.

This topic addresses the following competency:

- **Competency 3016.1.5: Supply Chain**  
The graduate organizes the supply chain to create competitive advantage for an organization.

This topic highlights the following objectives:



- Describe components of a supply chain.
- Determine whether to use insourcing or outsourcing in a given situation.
- Explain the difference between vertical and horizontal integration.
- Describe how to implement supply chain management.
- Describe supply chain management metrics.

## Chapter 4: Supply-Chain Management

Supply-chain management is evolving. The questions and issues are the same as last year, but the answers and solutions are different and will continue to change. This activity will provide you with a basis for understanding the fundamental elements of supply-chain management in order to prepare you for what you are likely to face in business today and in the future.

As you complete the listed material below, pay attention to the following key points:

- external suppliers, suppliers by tier, internal functions, external distributors
- vertical integration, backward integration, total-cost analysis, forward integration
- expansion into related but different industries (vertical), expansion into industry of a supplier, expansion in the same industry (horizontal)
- sourcing issues, supply-chain management, supply-chain distribution, metrics to assess effectiveness of supply chain

Before studying this chapter, you should know or review the following concepts:

- the implications of competitive priorities
- product-design considerations
- process-selection considerations

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 4 ("Supply-Chain Management"):

- Chapter 4 (a) Pre-Chapter Quiz
- Chapter 4 (b) Readings ("Supply Chain Management")
- Chapter 4 (c) Study Aids
  - PowerPoint Review
- Chapter 4 (d) Post-Chapter Quiz
- Chapter 4 Practice

## Management and Planning

The objectives of operations and inventory management are to

- optimally meet customer demands,
- to ensure cost-efficient operations,
- to minimize waste, and
- to maximize the inventory flow.



Planning for future inventory and production involves identifying the resources needed by the operations group to support the marketing plan.

## **Management**

When making replenishment decisions, a business must decide what, when, and how much should be purchased. Decisions about how much inventory to hold affect item costs, holding costs, ordering costs, and stockout (shortage) costs.

This topic addresses the following competency:

- **Competency 3016.1.6: Management and Planning**

The graduate applies operations and inventory management requirements and concepts to achieve operating objectives.

This topic highlights the following objectives:

- Describe how inventory management differs for manufacturing, retail, and service industries.
- Identify the objectives of inventory management.
- Describe methods used to verify inventory.

## **Chapter 12: Inventory Management**

Companies make replenishment decisions when managing inventory. In this chapter, you will study different types of inventory and how companies use those inventories, the costs of different inventory policies, inventory-management objectives and performance measures, and techniques for determining how much of an item to replenish.

As you complete the listed activity below, pay attention to the following key points:

- the six types of inventory
- the six ways of using inventory and the function each method serves
- basic inventory calculations
- the frequency and methods for various types of inventory tracking

Before studying this chapter, you should know or review the following concepts:

- competitive priorities
- internal and external customers
- advantages of small lot sizes
- forecast error

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 12 ("Inventory Management"):

- Chapter 12 (a) Pre-Chapter Quiz
- Chapter 12 (b) Readings ("Inventory Management")



- Chapter 12 (c) Animations
  - Solved Demo Problem 3
    - After completing the animation ask yourself the following questions:
      - Can I describe how to determine whether EEQ is feasible or not?
      - What role does the feasibility determination play in figuring total annual cost?
      - Why is ordering a larger quantity less expensive in this example?
- Chapter 12 (d) Study Aids
  - Flashcards
  - Problems (3, 5, 9, 13, 19, and 25)
  - PowerPoint Review
- Chapter 12 (e) Post-Chapter Quiz
- Chapter 12 Homework
- Chapter 12 Practice

## Planning

The aggregate plan, also called the production plan, details the production rate and the size of the workforce. This enables planners to determine the amount of inventory to be held; the amount of overtime or undertime authorized; any authorized subcontracting, hiring, or firing of employees; and back-ordering of customer orders.

This topic addresses the following competency:

- **Competency 3016.1.6: Management and Planning**  
The graduate applies operations and inventory management requirements and concepts to achieve operating objectives.

This topic highlights the following objectives:

- Describe the process of developing an aggregate plan.
- Choose an appropriate aggregate planning strategy for a given situation.
- Describe the various functional areas of the sales and operations planning process.
- Analyze the effectiveness of an existing aggregate plan.
- Describe the benefits and costs of enterprise resource planning (ERP) systems.
- Explain the different types of demand.
- Describe the objectives of manufacturing resource planning (MRP).
- Describe the role of capacity requirements planning (CRP).
- Describe the project life cycle.

## Chapter 13: Aggregate Planning

Aggregate planning is a collaborative strategic business process involving every functional area of the business. Each area provides objectives, metrics, assessments, capacity estimates, and financial forecasts needed to optimally achieve organizational objectives.

As you complete the activities below, pay attention to the following key points:



- the resources needed by operations to support the marketing plan
- projections from each functional area of the business funnel into sales and operations planning
- the aggregate plan identifies the resources needed by operations to support the marketing plan
- the level aggregate plan, which maintains workforce size and output by absorbing demand fluctuations with inventory and backorders
- the chase aggregate plan, which changes capacity to match demand
- the use of pricing strategies to smooth demand patterns
- the importance of controlling labor costs in service organizations that hold no inventory

Before studying this chapter, you should know or review the following concepts:

- competitive priorities
- capacity-management concepts
- work standards
- relevant inventory costs
- order-quantity models

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 13 ("Aggregate Planning"):

- Chapter 13 (a) Pre-Chapter Quiz
- Chapter 13 (b) Readings ("Aggregate Planning")
- Chapter 13 (c) Study Aids
  - Crossword Puzzles
  - Flashcards
  - Problems (1, 3, and 7)
  - PowerPoint Review
- Chapter 13 (d) Post-Chapter Quiz
- Chapter 13 Homework
- Chapter 13 Practice

### **Chapter 14: Resource Planning**

Enterprise-resource planning (ERP) software systems use a common database for organizing and managing business processes and sharing information. Other systems such as material-requirements planning (MRP) and capacity-requirements planning (CRP) also facilitate management and operational decision making.

As you complete the activities below, pay attention to the following key points:

- the benefits and costs of ERP systems
- the role of Supply Chain Intelligence (SCI) in making strategic decisions along the supply chain
- feasibility determinations made possible by CRP systems
- inventory records that facilitate control of materials on hand and order points





- the time-phased schedule capabilities MRP provides to show future demand, supply, and inventory projections
- quantity determinants of the replenishment order
- critical work-center utilization assessment using capacity-requirements planning

Before studying this chapter you should know or review the following concepts:

- e-commerce
- calculating available capacity
- calculating order quantities
- inventory record accuracy
- developing the master production schedule (MPS)

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 14 ("Resource Planning"):

- Chapter 14 (a) Pre-Chapter Quiz
- Chapter 14 (b) Readings ("Resource Planning")
- Chapter 14 (c) Case Studies
  - "Newmarket International Manufacturing Company B"
    - While reading this case, consider the following question:
      - What are the potential problems identified from analyzing the load profiles?
- Chapter 14 (d) Study Aids
  - Flashcards
  - Problems (1-5)
  - PowerPoint Review
- Chapter 14 (e) Post-Chapter Quiz
- Chapter 14 Practice

View the following supplemental video:

*Note: View the video in full screen at 720p for best results.*

### **Supplement D: Master Scheduling**

Read the following supplement sections in [Operations Management](#):

- Chapter Supplement D Readings

### **Chapter 16: Project Management**

The final essential part of planning requires a discussion of the five phases of the project lifecycle.

As you complete the activities below, pay attention to the following key points:



- the five-phase lifecycle of every project
- the use of network planning techniques such as PERT and CPM for creating time estimates

Before studying this chapter, you should know or review the following concepts:

- the implications of competitive priorities
- time standards
- Gantt charts

Access [Operations Management](#) and read, view, and complete the following activities in Chapter 16 ("Project Management"):

- Chapter 16 Readings ("Project Management")

## **Final Steps**

Congratulations on completing the activities in this course! This course has prepared you to complete the assessment associated with this course. If you have not already been directed to complete it, schedule and complete your assessment now.