# Course Description

The course examines problems faced by the operations manager in the planning, operating, and controlling of the production of goods and services. The major topics covered in the course include planning and analyzing operations, forecasting, inventory management, quality control and improvement, facility layouts, and supply chain management.

# University Learning Outcomes (ULO)

* **ULO1**:Communication Skills
* **ULO2**: Professional Competency
* **ULO3**: Moral and Ethical Judgment
* **ULO4**: Problem Solving
* **ULO5**: Critical Thinking
* **ULO6**: Leadership in Society
* **ULO7**: Critical and Competent Use of Technology

# Program Learning Outcomes (PLO)

* **PLO1**: Students will effectively research and communicate in writing (in APA format) ideas and arguments associated with business leadership and management issues. (ULO 1, 3, 4)
* **PLO2**: Students will apply knowledge and skills to develop a comprehensive business plan which demonstrates competency in the following areas: management, operations, finance, and marketing. (ULO 2, 4)
* **PLO3**: Apply critical thinking to real life work problems through the application of theoretical and experiential knowledge. (ULO 1, 2, 4)
* **PLO4**: Students will identify issues and strategies related to ethics and corporate social responsibility and its implications for business. (ULO 2, 3, 4)

# Course Learning Outcomes (CLO)

* **CLO1**: Define and use key terminology related to operations management. (PLO3)
* **CLO2**: Generate information to support decisions regarding business operations by using Microsoft Excel and quantitative problem-solving methods. (PLO5, PLO6)
* **CLO3**: Analyze processes that businesses use to create and deliver their goods and services to the customer. (PLO3, PLO4)
* **CLO4**: Evaluate sources of information regarding operations management. (PLO7)

# Student Expectations

Students are expected to:

* Ask probing and insightful questions related to course content.
* Make meaningful and relevant connections and application to their own learning process.
* Be productive and contributing members of class discussions.

# Required Course Materials

Collier, D. A. & Evans, J. R. (2016). *OM 6* (6th ed.). Independence, KY: Cengage Learning.

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# Suggested Point Values

|  |  |  |
| --- | --- | --- |
| **Assessment** | **Point Value** | **Due** |
| **Week 1** |  |  |
| Wiki Assignment: Pizza Restaurant Value Chain Table | 5 |  |
| Week One Resources Quiz | 10 |  |
| Discussion: Measuring Performance | 30 |  |
| Discussion: Poor Customer Experience | 15 |  |
| Assignment: The Value of a Customer | 20 |  |
| Week One Case Study: Hudson Jewelers | 70 |  |
|  |  |  |
| **Week 2** |  |  |
| Week Two Resources Quiz | 10 |  |
| Discussion: Scatterplots | 10 |  |
| Discussion: Purchasing a Product | 20 |  |
| Assignment: Measuring Customer Satisfaction | 20 |  |
| Week Two Case Study: Hudson Jewelers | 70 |  |
| Assignment: Competitive Advantage | 20 |  |
|  |  |  |
| **Week 3** |  |  |
| Week Three Resources Quiz | 10 |  |
| Discussion: Servicescape | 10 |  |
| Discussion: A Pizza Take-Out Service Delivery System | 10 |  |
| Discussion: Service Upset | 20 |  |
| Assignment: Service Design | 30 |  |
| Assignment: Utilization Analytics | 20 |  |
| Week Three Case Study: Hudson Jewelers | 70 |  |
|  |  |  |
| **Week 4** |  |  |
| Week Four Resources Quiz | 10 |  |
| Discussion: Supply Chain | 20 |  |
| Week Four Case Study: Hudson Jewelers | 70 |  |
| Assignment: “Should We Manufacture Internally or Outsource?” | 30 |  |
| Assignment: Designing a Supply Chain | 30 |  |
|  |  |  |
| **Week 5** |  |  |
| Week Five Resources Quiz | 10 |  |
| Discussion: Using Trend Lines | 15 |  |
| Assignment: Variation in a Time Series | 20 |  |
| Assignment: Forecasting Methods | 20 |  |
| Assignment: Forecasting Demand | 20 |  |
| **Week 6** |  |  |
| Week Six Resources Quiz | 10 |  |
| Discussion: Managing Inventory | 20 |  |
| Assignment: ABC Analysis Problem | 20 |  |
| Assignment: Economic Order Quantity | 20 |  |
| Assignment: Single Period Inventory | 20 |  |
|  |  |  |
| **Week 7** |  |  |
| Week Seven Resources Quiz | 10 |  |
| Wiki Activity: Quality Costs Wiki | 20 |  |
| Discussion: Measuring Defects | 20 |  |
| Assignment: Cost of Quality Analysis | 30 |  |
| Week Seven Case Study: Hudson Jewelers | 70 |  |
| Assignment: Quality Improvement Analysis | 20 |  |
|  |  |  |
| **Total Points** | **1000** |  |

**Grading Scale**

|  |  |
| --- | --- |
| **Grade** | **Range** |
| A | 93-100 |
| A- | 90-92 |
| B+ | 87-89 |
| B | 83-86 |
| B- | 82-80 |
| C+ | 77-79 |
| C | 73-76 |
| C- | 70-72 |
| D+ | 67-69 |
| D | 63-66 |
| D- | 60-62 |
| F | 59 |

# Course Schedule

|  |  |  |
| --- | --- | --- |
| **Week** | **Start** | **End** |
| One | <insert start date> | <insert end date> |
| Two | <insert start date> | <insert end date> |
| Three | <insert start date> | <insert end date> |
| Four | <insert start date> | <insert end date> |
| Five | <insert start date> | <insert end date> |
| Six | <insert start date> | <insert end date> |
| Seven | <insert start date> | <insert end date> |

# Weekly Learning Modules

|  |  |  |  |
| --- | --- | --- | --- |
| **Week One: Topic** | | | |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Explain the importance of operations management. | | CLO1, CLO2 | |
| * 1. Explain the differences between goods and services. | | CLO1, CLO2 | |
| * 1. Describe a customer benefit package. | | CLO1, CLO2 | |
| * 1. Describe a value chain and the two major perspectives that characterize it. | | CLO1, CLO2 | |
| * 1. Identify when outsourcing and vertical integration in value chains are appropriate. | | CLO1, CLO2 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Tutorials**  During this course you will be asked to use and participate in various technologies to complete activities and assignments.  **Review** the tutorials available on Blackboard as needed.  **Click** the **Student Resources** button from the menu on the left. | | N/A | N/A |
| **Weekly Participation and Discussion**  The purpose of the weekly discussions is to provide you with a way to synthesize the concepts presented in this course. Each week, you will respond to the discussion questions with a substantive post of 200-to 250-words that addresses all the prompts for the question by 11:59 p.m. EST of the listed due date. By the conclusion of each week, Sunday at 11:59 p.m. EST, you will make at least one substantive comment of 100-to 150-words to three of your classmates’ posts for each assigned discussion question. Your comments must further the discussion by following the RISE Model for meaningful feedback. It is recommended that you check in periodically throughout the week to ensure that you are meeting the participation requirement.  **Review** the [RISE Model for Peer Feedback](http://elwray.squarespace.com/feedback). | |  |  |
| **Week One Reading**  In this course, you’re going to learn about operations management, which covers a wide swath of topics. In the first two chapters, you’ll be learning about the basics of Operations Management and how basic economic principles affect operations management.  **Read** Ch. 1 & 2 of *OM 6*.  After studying these chapters, you should be able to:   * Explain the concept and importance of operation management * Describe what operations managers do. * Explain the difference between goods and services * Describe a customer benefit package * Describe the type of measures used for decision making * Explain the use of analytics in OM ad how internal and external measures are related * Explain how to design a good performance measurement system * Describe four models of organizational performance | | 1.1, 1.2, 1.3, 1.4, 1.5 |  |
| **Lecture: What Is Operations Management?**  **Watch** the “What Is Operations Management?”lecture video, available on Vimeo [8:16]:    **Post** any questions, comments, or insights you may have about the content of the lecture in the Week One General Q&A discussion forum on Blackboard. | | 1.1, 1.2, 1.3 | Lecture Activity – reviews lecture and posts response = **1 hour** |
| **Lecture: Value Chains**  **Watch** the “Value Chains,” lecture video, available on Vimeo [8:19]:  **Post** any questions, comments, or insights you may have about the content of the lecture in the Week One General Q&A discussion forum on Blackboard. | | 1.4, 1.5 | Lecture Activity – reviews lecture and posts response =  **1 hour** |
| **Resources: Technology Tutorials**  In this course, you’ll  **View** the following video tutorials located in the Week One Learning Module folder:   * YouTube video: “Creating Shapes in PowerPoint” located at <http://www.youtube.com/watch?v=2bp818fOByI> * Getting Started with Coursemate: <https://www.youtube.com/watch?v=DSewSl-sETw>     **Respond** to the following question in the Course Resource Tutorialsdiscussion board:   * What was the most helpful tip you learned from the tutorials? How can they be improved?   **Post** any questions you have about PowerPoint and Excel to the Tutorials Discussion Board. | | N/A | Lecture Activity – reviews lecture and posts response =  **1 hour** |
| ***Supplemental Resources and Activities***  *Explore these optional resources to deepen your understanding.* | | ***Alignment*** | ***AIE*** |
| **Adobe Connect Live Discussion**  **Review** [Adobe Connect Resources](https://sites.gmercyu.edu/student-resources/adobe-connect-resources/).  **Participate** in the scheduled live session with the course instructor. This session will provide an overview of the class and discuss the major assignments in the course.  **Prepare** to ask questions concerning the content of the week and the course as a whole.  Note: A recorded lecture will be made available to those who are unable to attend the live session. | |  | Live Discussion: lecture and discussion = **1 hour** |
| **Resources: Microsoft Excel Resources**  Microsoft**®** Excel is a powerful data organization and analytics tool used by businesses worldwide to accomplish many different kinds of tasks. It is a common business requirement to be familiar with Excel and its uses. In this course, Excel will be used to complete a wide variety of analytic functions to aid decision making in a business context. If you are not “up to speed” on your Excel here are some resources.  **Review** the following tutorials, as needed:   * [Excel 2013 Training Courses, Videos, and Tutorial](https://support.office.com/en-us/article/Excel-2013-training-courses-videos-and-tutorials-aaae974d-3f47-41d9-895e-97a71c2e8a4a?ui=en-US&rs=en-US&ad=US) [Playlist] * [Tutorial – Excel 2013 – 10 Things You Must Know](https://www.youtube.com/watch?v=p8fCzfUvwak) [38:53] * [Excel 2013 Tutorials for Beginners](https://www.youtube.com/playlist?list=PLE10sFVGtI1dt1sNjQp6LLUycV25FNkQo) [Playlist] | |  |  |
| **Practice Exercises: The Value of Loyal Customers**  **Resource:** 2017 Excel Templates MBA640.xlsx  The purpose of this activity is to allow you to practice working with concepts from this week’s readings before you tackle the assignments. If you have issues completing these Problems and Activities, please  **Access** the CourseMate Excel templates templates for Chapter 2.  **Complete** Problems & Activities 10, 11, & 12 from Chapter 2 the text.  **Submit** your completed Excel worksheets along with your evaluations in a Word document to the “Value of Loyal Customers” discussion board.  **Compare** your answers to the solutions provided and to those of your classmates.  **Ask** clarifying questions about any concepts or problems for which you desire additional information. | | 2.2 | Practice – peer and instructor feedback, shared posting and response =  **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Wiki Assignment: Pizza Restaurant Value Chain Table**  **Complete** three unique entries into the Input-Output Table of a value chain for a pizza restaurant, including the following elements:   * Suppliers * Inputs * Resources * Outputs * Customers * Target markets   **Post** your contributions to the table in the Value Chain wiki no later than 11:59 p.m. [EST] on Thursday. | | 1.4 | Wiki – shares work and posts response =  **1 hour** |
| **Week One Resources Quiz**  When you have completed your reading and review of all of the week’s required resources, you will be tested on your knowledge of the concepts and ideas presented in the required materials.  **Complete** the Week One Resources Quiz no later than 11:59 p.m. [EST] on Sunday.  *Note*. This quiz is open book and open note and counts for 10 points. | | 1.1- 1.5 | 1 hour test = 1 hour of instruction |
| **Discussion: Measuring Performance**  During a 5-day work week, FedEx identified the following errors in their service performance:   * Complaints reopened: 143 * Damaged packages: 18 * International: 96 * Invoice adjustments: 282 * Late pickup stops: 409 * Lost packages: 2 * Missed proof of delivery: 76 * Right date late: 751 * Traces: 42 * Wrong day late: 28   **Compute** the Service Quality Indicator by finding the weighted sum of errors as a percentage of total shipments and subtracting from 100 percent (see the “FedEx: Measuring Service Performance” box for the weights).  **Post** your results to the “Measuring Performance” discussion board.  **Write** a response to the following discussion question in the “Measuring Performance” discussion forum no later than Thursday:   * How might such an index be used in other organizations, such as a hotel or automobile service facility?   *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students comparing your results and evaluation to the solutions provided and to those of your classmates’. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday.  *Note*: These values are hypothetical and do not reflect any actual FedEx performance. | | 2.1 | Practice – peer and instructor feedback, shared posting and response =  **1 hour** |
| **Discussion: Poor Customer Experience**  **Pos**t a clear and logical response in 150 to 200 words to the following, providing specific examples to support your answers.   * Describe a customer experience you have had where the goods or service were unsatisfactory; for example, a defective product, errors or mistakes, poor service, etc. * How might the organization have handled it better and how might operations management have helped?   *Note*. Please be sure to apply concepts from the text to your post and responses.  *Note*. Initial answers to the questions are due by 11:59 p.m. (Eastern time) on Thursday.  **Respond** to at least threestudents in a manner that is thought provoking and appropriately challenges or elevates the discussion. All responses must be posted by 11:59 p.m. (Eastern time) on Sunday. | | 1.1 | Discussion – one post and reply to three other posts = **1 hour** |
| **Assignment: The Value of a Customer**  **Resource:** Excel Templates MBA640.xlsx  A retail store sells a popular cosmetic. The store manager was given $100,000 by the corporate office to improve store performance any way she thinks best. The “base case” information is a price of $30 per bottle, a contribution margin of 0.50, a customer defection rate of 17%, and a repurchase frequency of 3 times a year. The manager has three potential options for using the funds and would like to know which use would lead to the greatest benefit for the company.   * Option 1: Increase the contribution margin to 58% through efficiency upgrades. * Option 2: Reduce the customer defection rate to 15% through adoption of an intensive customer satisfaction and loyalty program. * Option 3: Increase the repurchase frequency to 4 times per year through extensive advertising.   **Use** the VLC tab on the CH. 2 Coursemate Excel Template to assist you in calculating the value of a loyal customer.  **Write** a 200-word report to the store manager explaining which option would lead to the greatest benefit to the company by maximizing the value of a loyal customer. Use your Excel computations to support your conclusion.  **Submit** this assignment to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 2.2 | Problem Solving Scenario – one analysis and posting = **.5 hours** |
| **Week One Case Study: Hudson Jewelers**  In this course, you’ll be following the Hudson Jeweler’s case study. You’ll be asked to complete assignments on a per chapter basis. If multiple chapters are required, You will submit both assignments to your instructor at the same time.  **Read** all the instructions carefully so you successfully submit the assignments to your instructor.  **Read** “Hudson Jewelers Case Study” **(Case Study Attached)**  Chapter 1 Assignment  **Write** a 1000- to 1300-word paper analyzing Hudson Jewelers from an operations management perspective. Include the following in your paper:   * Use one of the three value chains frameworks discussed in these chapter to characterize the diamond chain value * How does the value chain gain a customer? * How does it create value? * How does it keep a customer? * What major diamond producers are doing regarding social, environmental and financial sustainability practices. Study corporate and annual reports for example. Provide two or three examples   Chapter 2 Assignment   * Complete Questions #1   **Submit** your completed Excel worksheets along with your evaluations in a Word document to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 1.1 | Case Study – analysis for assessment = **1 hour** |
| **Total** |  |  |  |

# Faculty Notes

**Adobe Connect:** Consider posting an announcement asking students to submit any questions or topics they'd like addressed ahead of time. The instructor can then utilize those questions that come up in the first part of the week to tailor the live Adobe Connect class session that would be scheduled toward the later part of the week. That 1-hour synchronous session will allow students the opportunity to go over any questions they had with the homework and clarify any misconceptions they have about the course content. All Adobe Connect sessions should be recorded and a link to the recording be posted to the course page so any student who misses the session can review it later in the week.

*Note:* It is the instructor’s choice as to what day they will schedule the Adobe Connect Live Session, but it is recommended that they schedule this session for Wednesday of the week so students have plenty of time to review their homework prior to the deadline on Sunday.

The learning activities and assignments this week provide students with a basic overview of operations management. We explore the main topics, such as goods, services, customer benefit package, value chains, and supply chains. Students will have the opportunity to apply their understanding of these concepts and receive feedback before assignments are due.

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# Assignments

## Required:

* **Discussion questions/Wiki Assignment:** The questions encourage students to consider and develop their thoughts on the question topics, share their thoughts with the class, and gain perspective by reading the responses of other class members.
* **Hudson Case Study:** In this course, the students will be following the Hudson Jeweler’s case study. They’ll be asked to complete assignments on a per chapter basis relevant to the weekly readings.
* **Weekly Resource Quizzes:** These quizzes are included as a self-check for students to allow them to gauge their comprehension of the course materials as they move through the course.
* **The Value of a Customer:** This exercise assesses students on the “Value of a Loyal Customer” metric and asks students to analyze the factors that influence that value.

# Content Outline

Please use this Content Outline to guide students through the course material.

**Chapter 1**

1. Explain the concept and importance of operation management
   1. What is operations management?
2. Describe what operations managers do.
   1. Process design
   2. Inventory management
   3. Scheduling
   4. Quality management
3. Explain the difference between goods and services
   1. Goods
      1. Durable
      2. Non-durable
   2. Services
      1. Service encounter
      2. Moment of truth
   3. Seven Differences
4. Tangible vs. intangible
5. Low customer participation vs. high customer participation
6. Can predict demand vs. demand more unpredictable
7. Can be stored vs. can’t be stored
8. Low-level service skills vs. high customer service skills
9. Factories not near customers vs. services near customers
10. Patent protected vs. not patent protected
11. Describe a customer benefit package
    1. Primary good or service
    2. Peripheral good or service
    3. Variant
    4. Processes
       1. Value creation processes
       2. Support processes
       3. General management processes
12. Explain the difference between value chains and supply chains, and identify three general types of processes in a business
    1. Differences
       1. Value Chain – a network of facilities and processes
       2. Supply Chain – a portion of the value chain
    2. Three general types of processes in a business
       1. Core Processes
       2. Support Processes
       3. General Management Processes
13. Contrast the three different frameworks for describing value chains
    1. Input–output method
       1. Suppliers
       2. Inputs
       3. Transformation
       4. Outputs
       5. Customers and markets
    2. Pre–post service model
       1. Gaining the customer
       2. Value creation
       3. Keeping the customer
    3. Typical Goods-Producing Supply Chain Structure
14. Summarize the historical development of OM
    1. Seven Major Eras of Operations Management
15. Describe key challenges facing OM
    1. Customers
    2. Technology
    3. Workforce
    4. Globalization
    5. Sustainability
    6. Optimizing supply chains

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**Chapter 2**

1. Describe the types of measures for decision making
   1. Financial
   2. Customer and Market
   3. Quality and Time
   4. Flexibility
   5. Innovation and Learning
2. Explain the use of analytics in OM and how internal and external measures are related
   1. Interlinking
      1. Cause and Effect
   2. The value of a loyal customer metric
      1. Compute the value of a loyal customer
         1. Customer retention and defection rate
         2. Revenue per unit (P)
         3. Contribution margin
         4. Repurchase frequency
         5. Buyer’s life cycle
3. Explain how to design a good performance measurement system
   1. Actionable Measures
4. Describe the four models of organizational performance
   1. Baldridge Performance Excellence Framework
   2. Balanced Scorecard
   3. The Value Chain Model
   4. The Service Profit Chain

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| --- | --- | --- | --- |
| Week Two: Measures and Strategy | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Interpret internal and external analytics. | | CLO1, CLO2 | |
| * 1. Interpret the value of a loyal customer. | | CLO2 | |
| * 1. Describe how organizations seek to gain competitive advantage through competitive priorities. | | CLO3 | |
| * 1. Describe how customers evaluate goods and services. | | CLO3 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Week Two Reading**  This week, in Chapters 3, you’ll be learning about the basics of Operations Management and how customers and technology affect operations management.  **Read** Ch. 3 of *OM 6*.  After studying these chapters, you should be able to:   * Explain how organizations seek to gain competitive advantage * Explain approaches for understanding customer wants and needs * Describe how customers evaluate goods and services * Explain the five key competitive priorities * Explain the role of OM, sustainability, and operations strategic planning * Describe Hill’s framework for operations strategy | | 2.1–2.4 |  |
| **Lecture: Measuring Performance and Strategy**    **Watch** the “Measurement” Lecture Video, available on Vimeo (7:56): <http://vimeo.com/77550520>  **Watch** the “Operations Strategy” Lecture Video, available on Vimeo (10:06): <http://vimeo.com/77550522>  **Post** any questions, comments, or insights you may have about the content of the lecture in the Week Two General Q&A discussion forum on Blackboard. | | 2.1–2.4 | Lecture Activity – reviews lecture and posts response =  **1 hour** |
| **Lecture: Creating Graphs in Excel**  **Watch** the [Creating Graphs in Excel](http://screencast.com/t/PZ94WAjl/) tutorial (1:32).  **Post** any questions you have about creating graphs in Excel to the Tutorials Discussion Board. | | N/A | Lecture Activity – reviews lecture and posts response =  **.5 hours** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week Two Resources Quiz**  When you have completed your reading and review of all of the week’s required resources, you will be tested on your knowledge of the concepts and ideas presented in the required materials.  **Complete** the Week Two Resources Quiz no later than 11:59 p.m. [EST] on Sunday.  *Note*. This quiz is open book and open note and counts for 10 points. | | 2.1 – 2.4 | 1 hour test = 1 hour of instruction |
| **Discussion: Scatterplots**  **Create** 3 scatterplot graphs of the variables using the Week Two Scatterplots Excel document.  **Identify** the types of relationships illustrated in the graphs.  **Post** your results to the “Scatterplots” discussion board.  **Write** a response to the following discussion prompt and question in the “Scatterplots” discussion forum:   * Explain the importance and meaning of the scatterplot graphs you created. * What were the types of relationship illustrated in your graphs? * What evaluation can you make based on the scatterplot graphs?   *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students comparing your results and evaluation to the solutions provided and to those of your classmates’. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 2.1 | Practice – peer and instructor feedback, shared posting and response =  **1 hour** |
| **Discussion: Purchasing a Product**  **Select** a product or service that is available to purchase.  **Write** a response to the following discussion question in the “Purchasing a Product” discussion forum:   * How would you evaluate whether you will purchase or use a product or service? * Describe how you would purchase the product or service. * Include in your example the concepts of search attributes, experience attributes, and credence attributes.   *Note*.Please be sure to apply concepts from the text to your post and responses.  Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students, focusing on the additional attributes you would use to evaluate the product or services they selected. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 2.4 | Discussion – one post and reply to three other posts = **1 hour** |
| **Assignment: Measuring Customer Satisfaction**  A call center tracked performance metrics over a period of time to identify if there was a relationship between call time, first call resolution, and overall customer satisfaction. Below is the data:   |  |  |  |  | | --- | --- | --- | --- | | **Quarter** | **Average Hold Time** | **Percent of First Call Resolution** | **Overall Customer Satisfaction** | | Q1 | 22 sec | 82% | 96% | | Q2 | 34 sec | 80% | 92% | | Q3 | 44 sec | 88% | 82% | | Q4 | 67 sec | 85% | 84% | | Q5 | 38 sec | 85% | 90% | | Q6 | 70 sec | 76% | 80% | | Q7 | 86 sec | 73% | 81% |   **Create** six scatterplot graphs in Excel that show the relationship between the following variables:   * Quarter – Average hold time * Quarter – Percent solved first time * Quarter – Customer satisfaction * Average hold time – Percent solved first time * Average hold time – Customer satisfaction * Percent solved first time – Customer satisfaction   *Note*: You will have to type all of the numbers into Excel.  **Paste** these scatterplots into a Word document.  **Write** a 250- to 500- word essay describing the implications of the relationships depicted in these graphs on the factors affecting overall customer satisfaction.  **Submit** your titled graphs in a Word document along with your description no later than 11:59 p.m. [EST] on Sunday. | | 2.1 | Problem Solving Scenario – one analysis and posting = **1 hour** |
| **Week Two Case Study: Hudson Jewelers**  **Read** “Hudson Jewelers Case Study” **(Case Study Attached)**  Chapter 3 Assignment   * Complete Questions 1-3 with complete responses.   **Submit** your completed Excel worksheets along with your evaluations in a Word document to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 3.4 | Case Study analysis for assessment  **.5 hours** |
| **Assignment: Competitive Advantage**  **Write** a 350- to 500- word paper summarizing the competitive advantage for each of the following companies:   * eBay * Southwest Airlines * Starbucks * Apple   **Submit** this assignment to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 2.3 | Log – one private posting =  **.5 hours** |
| **Total** |  |  |  |

# Faculty Notes

This week’s learning activities introduce students to the process of measuring performance in a variety of operational areas for the purpose of improvement. Students will begin to use some basic tools, including Microsoft Excel, to create and interpret analytics. Students will receive an introduction to various competitive strategies and have an opportunity to apply these concepts to contemporary businesses

# Assignments

* **Discussion questions:** The questions encourage students to consider and develop their thoughts on the question topics, share their thoughts with the class, and gain perspective by reading the responses of other class members.
* **Hudson Case Study:** In this course, the students will be following the Hudson Jeweler’s case study. They’ll be asked to complete assignments on a per chapter basis relevant to the weekly readings.
* **Weekly Resource Quizzes:** These quizzes are included as a self-check for students to allow them to gauge their comprehension of the course materials as they move through the course.
* **Measuring Customer Satisfaction:** This assignment requires students to identify variables that appear to have a relationship with customer satisfaction. Students should identify variables that have a direct, inverse, or no relationship with satisfaction by viewing the graphs they created and tentatively identifying areas that are key to improving satisfaction.
* **Competitive Advantage:** This assignment assesses students’ ability to summarize the competitive advantages and priorities of some contemporary companies.

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# Content Outline

Please use this Content Outline to guide students through the course material.

**Chapter 3**

1. Explain how organizations seek to gain competitive advantage
   1. A firm’s ability to achieve market and financial superiority
2. Explain approaches for understanding customer wants and needs
   1. Order Qualifies
   2. Order Winners
3. Describe how customers evaluate goods and services
   1. Search attributes
   2. Experience attributes
   3. Credence attributes
4. Explain the five key competitive priorities
   1. Cost
   2. Quality
   3. Time
   4. Flexibility
   5. Innovation
5. Explain the role of OM, sustainability, and operations strategic planning
   1. Strategy
   2. Core Competencies
   3. Sustainability
6. Describe Hill’s framework for operations strategy
   1. Corporate Objectives
   2. Marketing Strategy
   3. How do goods and services qualify and win orders in the marketplace
   4. Operations Design Choices
   5. Infrastructure

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| Week Three: Service Delivery | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Explain the elements of service delivery and service encounter design. | | CLO1, CLO3 | |
| * 1. Identify processes used to create and improve a service delivery system. | | CLO3 | |
| * 1. Calculate and interpret utilization analytics. | | CLO2 | |
| * 1. Research information regarding operations management. | | CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Week Three Reading**  This week, you will be reading selected sections from Chapters 5 and 7. You will be learning the basics of Operations Management and how location plays a role in costs such as transportation, as well as process design and resource utilization.  **Read** pages 93-100 & 141-154 of *OM 6*.  After studying these chapters, you should be able to:   * Explain the five elements of service delivery system design * Describe the Four Elements of service encounter design * Describe how to apply process and value stream mapping for process design * Explain how to improve process design and analyze process maps * Describe how to compute resource utilization and apply Little's Law | | 3.1, 3.2, 3.3, 3.4 |  |
| **Lecture: Service Delivery**  **Watch** the Service Delivery Lecture Video, available on Vimeo (17:31): <http://vimeo.com/77550521>  **Post** any questions, comments, or insights you may have about the content of the lecture in the Week Three General Q&A Discussion Forum on Blackboard. | | 3.1, 3.2, 3.3, 3.4 | Lecture Activity – reviews lecture and posts response =  **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week Three Resources Quiz**  When you have completed your reading and review of all of the week’s required resources, you will be tested on your knowledge of the concepts and ideas presented in the required materials.  **Complete** the Week Three Resources Quiz no later than 11:59 p.m. [EST] on Sunday.  *Note*. This quiz is open book and open note and counts for 10 points. | | 3.1 – 3.4 | 1 hour test = 1 hour of instruction |
| **Discussion: Servicescape**  **Watch** the “Service Design Concept” video, available on YouTube (4:05): <http://www.youtube.com/watch?v=U5yCjO-rwws>  **Write** a response to the following prompt and discussion questions in the “Servicescape” discussion forum:   * Write a description of the Servicescape for MOBI.E. * Were all elements of a Servicescape addressed? Why or why not? * How was MOBI.E able to expand on the basic elements of a service scape?   *Note*.Please be sure to apply concepts from the text to your post and responses.  Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 3.1 | Discussion – one post and reply to three other posts = **1 hour** |
| **Discussion: A Pizza Take-Out Service Delivery System**  **Review** the pizza take-out service delivery process map.  For each step in the flowchart, there is an opportunity for errors to be made, inefficiencies, progress to be made, and room for improvement.  **Select** two steps and identify the following:   * Possible errors that could be made * How that step can be measured for effectiveness * Suggestions to improve that step   *Note*. Please be sure to apply concepts from the text to your post and responses.  Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 3.2 | Discussion – one post and reply to three other posts = **1 hour** |
| **Discussion: Service Upset**  **Write** a response to the following discussion question in the “Service Upset” discussion forum:   * Describe a personal experience where you had a “service upset.” * Was the employee empowered to make things right? * How did this affect your perceptions of the company? Brand? Product?   *Note*. Please be sure to apply concepts from the text to your post and responses.  Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 3.2 | Discussion Board – one posting and replying to three other posts =  **1 hour** |
| **Assignment: Service Design**  **Complete** the Service Design Assignment Handout.  **Submit** the assignment to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 3.1, 3.2 | Reflection Activity – one private posting =  **1 hour** |
| **Assignment: Utilization Analytics**  **Complete** Problems & Activities 5, 6, & 7 from Chapter 7 the text.  **\*Refer to text for Equations**  **Submit** your computations and evaluations as a Word document to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 3.3 | Problem Solving – analysis for assessment = **.5 hours** |
| **Week Three Case Study: Hudson Jewelers**  **Read** “Hudson Jewelers Case Study” **(Case Study Attached)**  **Write** a 350 -700 word paper based on the Chapter reading to include the following:   * **Define** (a)servicescape for Hudson Jewelers using three dimensions as subheadings, and (b) the nature of Hudson Jewelers’ service encounter * **Propose** a service guarantee for Hudson Jewelers. What exactly will you guarantee? Should it be explicit in writing, or simply an implicit, non-written guarantee.? Or is it better to not do it at all? Explain and justify your logic.   **Submit** the assignment to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 3.4 | Case Study analysis for assessment  **.5 hours** |
| **Total** |  |  |  |

# Faculty Notes

The assignments this week are designed to have students reflect on the elements of service design and service delivery. Businesses need to be able to systematically evaluate the services they are providing for the customers, to measure and improve those services.

# Assignments

## Required:

* **Discussion questions:** The questions encourage students to consider and develop their thoughts on the question topics, share their thoughts with the class, and gain perspective by reading the responses of other class members.
* **Hudson Case Study:** In this course, the students will be following the Hudson Jeweler’s case study. They’ll be asked to complete assignments on a per chapter basis relevant to the weekly readings.
* **Weekly Resource Quizzes:** These quizzes are included as a self-check for students to allow them to gauge their comprehension of the course materials as they move through the course.
* **Service Design:** This assignment requires students to reflect on the elements of a servicescape and to map a service process. Students should be able to break down the key elements of the processes and identify if the process can be improved.
* **Utilization Analytics:** These exercises provide a quantitative problem-solving activity for the students to analyze the capacity of processes.
* **Weekly Resource Quiz:**  These quizzes are included as a self-check for students to allow them to gauge their comprehension of the course materials as they move through the course.

# Content Outline

Please use this Content Outline to guide students through the course material.

**Chapter 5**

1. Explain the five elements of service delivery system design
   1. Facility location and layout
   2. Servicescape
      1. Ambient conditions
      2. Spatial layout and functionality
      3. Signs, symbols, and artifacts
      4. Lean, complex servicescapes
   3. Service process and job design
      1. Satisfy internal and external customers
      2. Trending towards cross-functional teams
   4. Service encounter design
      1. Customer contact behavior and skills
      2. Service provider selection, development, empowerment
   5. Technology and Information Support Systems
2. Describe the Four Elements of service encounter design
   1. Customer -contact behavior and skills
   2. Service-provider selection, and empowerment
   3. Recognition and reward
   4. Service recovery and guarantees

**Chapter 7**

1. Describe how to apply process and value stream mapping for process design
   1. Work
      1. Tasks
      2. Activity
      3. Process
      4. Value chain
   2. Process map
      1. Service blueprints or service maps
2. Explain how to improve process design and analyze process maps
   1. System improvement
      1. Improving efficiency
      2. Improving flexibility
      3. Improving quality
      4. Elimination of non-value-added activities
      5. Decreasing process flow time
      6. Decreasing the carbon footprint
3. Describe how to compute resource utilization and apply Little's Law
   1. Calculate and interpret utilization analytics.
      1. Calculating utilization
      2. Implications

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| Week Four: Supply Chain Management | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Describe key issues in designing and improving supply chains. | | CLO1, CLO3 | |
| * 1. Explain important factors and decisions in locating facilities. | | CLO3 | |
| * 1. Summarize sources of information obtained through analysis of external sources of information. | | CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Week Four Reading**  This week, you will be reading Chapter 6. You will be learning the basics of Operations Management and how Supply Chain Design is a key operations planning activity.  **Read** Ch. 6 of *OM 6*.  After studying these chapters, you should be able to:   * Explain the concept of a global supply chain and describe the key decisions * Describe the key tradeoffs that managers must consider in designing supply chains, and how to evaluate outsourcing and off shoring decisions. * Explain the types of decisions required and criteria used to locate facilities in supply chains, and be able to apply the center of gravity method * Explain how the transportation model can be used to help optimize costs in supply chain | | 4.1, 4.2, 4.3 |  |
| **Lecture: Supply Chain Management**  **Watch** the Service Delivery lecture video, available on Vimeo (14:34): <http://vimeo.com/79242699>  **Post** any questions, comments, or insights you may have about the content of the lecture in the Week Four General Q&A Discussion Forum on Blackboard. | | 4.1, 4.2, 4.3 | Lecture Activity – reviews lecture and posts response =  **1 hour** |
| **Lecture: Economics of Outsourcing**    **Watch** the “Economics of Outsourcing” lecture video, available on YouTube [3:09]: <http://www.youtube.com/watch?v=z6ZU68aKwI8>  **Post** any questions, comments, or insights you may have in the Week One Discussion Board. | | 1.5 |  |
| **Practice Exercises: Data Analysis**  **Resource:** Excel Templates MBA640.xlsx  **Access** the CourseMate Excel templates for Chapter 6.  **Complete** Problems & Activities 4, 5, 6, & 10 from Chapter 6 of the text.  **Submit** your completed Excel worksheets along with your evaluations in a Word document to the Data Analysis discussion board.  *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 4.2 | Practice – peer and instructor feedback, shared posting and response =  **2 hours** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week Four Resources Quiz**  When you have completed your reading and review of all of the week’s required resources, you will be tested on your knowledge of the concepts and ideas presented in the required materials.  **Complete** the Week Four Resources Quiz no later than 11:59 p.m. [EST] on Sunday.  *Note*. This quiz is open book and open note and counts for 10 points. | |  |  |
| **Discussion: Supply Chain**  **Write** a 500- to 800-word response describing an automobile manufacturer supply chain in the “Supply Chain” discussion forum, including:   * Examples of suppliers, production facilities, and distribution methods.   Initial entries are due no later than Thursday at 11:59 p.m.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 4.1 | Blog – shares work and posts response =  **1 hour** |
| **Week Four Case Study: Hudson Jewelers**  **Read** “Hudson Jewelers Case Study” **(Case Study Attached)**  **Complete** Case Question for Discussion.  **Submit** your evaluations as a Word document to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 4.2 | Case Study – analysis for assessment = **1 hour** |
| **Assignment: “Should We Manufacture Internally or Outsource?”**  **Resource:** Excel Templates MBA640.xlsx  **Download** the CourseMate Excel templates for Chapter 6.  **Complete** Problems & Activities 7, 8, & 9 from Chapter 6 of the text.  **Submit** your completed Excel worksheets along with your evaluations in a Word document to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 1.5 | Problem Solving – analysis for assessment = **.5 hours** |
| **Assignment: Designing a Supply Chain**  **Select** a business with which you are familiar.    **Write** a 350- to 700-word description and evaluation of the key elements in this company’s supply chain such as suppliers, production facilities, and distribution methods.  **Include** the following elements in your analysis:   * Explain the important factors that need to be considered when designing a supply chain. * Evaluate if your selected company considered these factors when designing their supply chain.   **Submit** the assignment to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 4.1 | Reflection Activity – one private posting =  **1 hour** |
| **Total** |  |  |  |

# Faculty Notes

This week’s assignments are designed to assess elements of the supply chain and the student’s ability to make and support key decisions regarding supply chains. Students will be required to identify elements and to use quantitative techniques to find the best location for facilities.

# Assignments

## Required:

* **Discussion questions/Practice Problems:** The questions encourage students to consider and develop their thoughts on the question topics, share their thoughts with the class, and gain perspective by reading the responses of other class members.
* **Hudson Case Study:** In this course, the students will be following the Hudson Jeweler’s case study. They’ll be asked to complete assignments on a per chapter basis relevant to the weekly readings.
* **Weekly Resource Quizzes:** These quizzes are included as a self-check for students to allow them to gauge their comprehension of the course materials as they move through the course.
* **Should We Manufacture Internally or Outsource?:** This assignment serves two purposes. First, it provides a gentle introduction for the student to using Microsoft Excel for analyzing problems using well-structured templates. Second, students will learn to evaluate the economics of outsourcing elements of the value chain.
* **Designing a Supply Chain:** This exercise asks students to identify and reflect on the elements of a supply chain for a business they are familiar with.

# Content Outline

Please use this Content Outline to guide students through the course material.

1. Explain the concept of a global supply chain and describe the key decisions
   1. Multinational enterprise
   2. Decisions in Supply Chain Design
      1. Strategy
      2. Control
      3. Location
      4. Sustainability
      5. Technology
      6. Digital Content
      7. Sourcing
      8. Logistics and Transportation
      9. Outsourcing
      10. Managing Risks
      11. Measuring Performance
2. Describe the key tradeoffs that managers must consider in designing supply chains, and how to evaluate outsourcing and off shoring decisions.
   1. Efficient or responsive supply chains
   2. Push-pull supply chains
   3. vertical integration
      1. Backward integration
      2. Forward integration
   4. Outsourcing
      1. Define
      2. Computing the economics of outsourcing
         1. Fixed costs
         2. Variable costs
      3. Contract manufacturers
      4. Third-party logistics providers
   5. Offshoring and Reshoring
3. Explain the types of decisions required and criteria used to locate facilities in supply chains, and be able to apply the center of gravity method
   1. Considerations
      1. Global
      2. Regional
      3. Community
      4. Site
   2. Quantitative methods for analyzing location decisions
      1. Analyzing costs
      2. Center-of-gravity method
      3. Rating systems
4. Explain how the transportation model can be used to help optimize costs in supply chain

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| Week Five: Forecasting | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Explain the elements of forecasting. | | CLO1, CLO2 | |
| * 1. Describe the various elements that cause variation in a time series. | | CLO1 | |
| * 1. Evaluate forecasting methods to produce the best predictions. | | CLO1, CLO2 | |
| * 1. Use statistical regression techniques to forecast demand. | | CLO1, CLO2 | |
| * 1. Synthesize sources of information into a topic paper on an aspect of operations management. | | CLO4 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Week Five Reading**  This week, you will be reading Chapter 9. You will be learning the basics of Operations Management and the important role that forecasting is a key operations planning activity.  **Read** Ch. 9 of *OM 6*.  After studying these chapters, you should be able to:   * Describe the importance of forecasting * Explain basic concepts of forecasting and time series * Explain how to apply simple moving average and exponential smoothing models * Describe how to apply regression as a forecasting approach * Explain the role of judgement in forecasting * Describe how statistical and judgmental forecasting techniques are applied in practice | | 5.1–5.5 |  |
| **Lecture: Forecasting**  **Watch** the “Forecasting” Lecture Video, available on Vimeo (12:58): <http://vimeo.com/77438371>    **Post** any questions, comments, or insights you may have about the content of the lecture in the Week Five General Q&A discussion forum on Blackboard. | | 5.1–5.5 | Lecture Activity – reviews lecture and posts response =  **1 hour** |
| **Resource: Trend Lines in Excel**  **Watch** the Trend Lines in Excel tutorial, available on YouTube (2:58): <https://www.youtube.com/watch?v=rBme0yo45Bo>  **Post** any questions, comments, or insights you may have about trend lines in Excel to the Tutorials discussion board. | | N/A | Lecture Activity – reviews lecture and posts response =  **.5 hours** |
| **Practice Exercises: Using Excel to Forecast**  **Resource:** Excel Templates MBA640.xlsx  **Access** the CourseMate Excel templates for Chapter 9.  **Complete** Problems & Activities 4 & 5 from Chapter 9 of the text.  **Submit** your completed Excel worksheets along with your evaluations in a Word document to the Using Excel to Forecast discussion board.  *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 5.3, 5.4 | Practice – peer and instructor feedback, shared posting and response =  **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week Five Resources Quiz**  When you have completed your reading and review of all of the week’s required resources, you will be tested on your knowledge of the concepts and ideas presented in the required materials.  **Complete** the Week Five Resources Quiz no later than 11:59 p.m. [EST] on Sunday.  *Note*. This quiz is open book and open note and counts for 10 points. | | ALL |  |
| **Discussion: Using Trend Lines**  **Resource:** GMercyU-MBA640-Gross\_Domestic\_Product\_2000\_to\_2012.xlsx  **Plot** the scatter diagram for the data in the Gross Domestic Product 2000–2012 file, including a trend line of the annual gross domestic product by year from 2000–2012.  **Summarize** the trend in Gross Domestic Product using the regression line to predict GDP in 2013.  **Post** your results to the Using Trend Lines discussion board.  *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 5.4 | Practice – peer and instructor feedback, shared posting and response =  **1 hour** |
| **Assignment: Variation in a Time Series**    **Resources:**New Car Sales Handout    **Review** Figure 1 in the New Car Sales Handout, showing graphs of annual new car sales from 2001–2012.  **Review** Figure 2 in the New Car Sales Handout, showing new car sales by month from 2009–2012.  **Write** a 350- to 700-word paper describing the elements of the time series that you can identify in Figure 1 and the elements that can be demonstrated in Figure 2.  **Submit** the assignment to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 5.2 | Problem Solving – analysis for assessment = **.5 hours** |
| **Assignment: Forecasting Methods**  **Resources:** New Car Sales Excel Sheet  The Maryland DMV has tracked the annual number of new car sales from 2000–2012. They would like to adopt a new forecasting method to help forecast new car sales.  **Review**the New Car Sales Excel Sheet.  **Identify** the model that would result in the lowest value of mean square error (MSE) using the Excel templates for moving average and exponential smoothing.  **Write** a 350- to 700-word paper that recommends to the Maryland DMV the best method to use for forecasting new car sales.  **Include** in your paper a description of the experiment with:   * Different values for the number of months to average * Different coefficients for exponential smoothing   **Submit** the assignment to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 5.3 | Problem Solving – analysis for assessment = **.5 hours** |
| **Assignment: Forecasting Demand**    **Resources:**New Car Sales Handout  **Review** the New Car Sales Handout.  **Create** a scatter graph with a linear trend line using the information from the handout.  **Forecast** new car sales for 2013 and 2014 using the trend line.  **Submit** your graph and forecasting results in a Word document to your instructor via Blackboard no later than 11:59 p.m. [EST] on Sunday. | | 5.4 | Problem Solving – analysis for assessment = **.5 hours** |
| **Total** |  |  |  |

# Faculty Notes

The learning activities and assignment this week are designed to introduce the students to quantitative forecasting techniques that are used to support business decisions. Students will use Microsoft Excel templates and trend lines to prepare and evaluate forecasts.

# Assignments

## Required:

* **Discussion questions:** The questions encourage students to consider and develop their thoughts on the question topics, share their thoughts with the class, and gain perspective by reading the responses of other class members.
* **Weekly Resource Quizzes:** These quizzes are included as a self-check for students to allow them to gauge their comprehension of the course materials as they move through the course.
* **Variation in a Time Series:** This exercise requires the student to identify sources of variation in a time series based on visual cues in a chart. Figure 1 illustrates only annual sales, which will not have any seasonal variation, whereas Figure 2 will contain all sources of variation.
* **Forecasting Methods:** This assignment requires the student to use Excel templates for Exponential Smoothing and Moving Average methods of forecasting to find an optimal solution for a business.
* **Forecasting Demand:** This assignment requires students to use a linear trend line to forecast sales of new cars.

# Content Outline

Please use this Content Outline to guide students through the course material.

1. Describe the importance of forecasting
   1. Drive Analyses and decisions related to operations
2. Explain basic concepts of forecasting and time series
   1. Forecast Planning Horizon
      1. Planning horizon
      2. Time bucket
   2. Data Patterns in a Time Series
      1. Trend
      2. Seasonal Patterns
      3. Cyclical Patterns
      4. Random Variations
      5. Irregular Variation
   3. Forecast Errors and Accuracy
3. Explain how to apply simple moving average and exponential smoothing models
   1. Simple Moving Average
      1. Average of most recent observations
   2. Exponential Smoothing
      1. Weighted average of past time-series values
4. Describe how to apply regression as a forecasting approach
   1. Scatter diagrams
   2. Linear trend line
5. Explain the role of judgement in forecasting
   1. Relies upon opinions and expertise of people in developing forecast
      1. Grassroots Forecasting
      2. Delphi Method
6. Describe how statistical and judgmental forecasting techniques are applied in practice
   1. Bias

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| Week Six: Managing Inventory | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Define key terms in the management of inventory | | CLO1 | |
| * 1. Perform an ABC analysis | | CLO2 | |
| * 1. Analyze inventory purchases using the EOQ Model | | CLO2 | |
| * 1. Apply the single period inventory model | | CLO2 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Week Six Reading**  This week, you will be reading Chapter 11. You will be learning the basics of Operations Management focusing on managing inventories in Supply Chain.  **Read** Ch.11 of *OM6.*  After studying these chapters, you should be able to:   * Explain the importance inventory, types of inventories, and key decisions and costs * Describe the major characteristics that impact inventory decisions * Describe how to conduct an ABC analysis. * Explain how a fixed-order-quantity inventory system operates and how to use the economic ordering quantity (EOQ) and safety stock models * Explain how a fixed-period inventory system operates * Describe how to apply the single inventory- period inventory model | | 6.1, 6.2, 6.3, 6.4 |  |
| **Lecture: Managing Inventory**  **Watch** the "Managing Inventory" Lecture Video, available on Vimeo (17:17): <https://vimeo.com/92857462>  **Watch** the “Conducting an ABC Inventory in Excel” Lecture Video, available on ScreenCast:  <http://screencast.com/t/OutdK5JvtSNq>  **Post** any questions, comments, or insights you may have about the content of the lecture in the Week Six General Q&A discussion forum on Blackboard. | | 6.1, 6.2, 6.3, 6.4 | 1 hour |
| **Practice Exercises: Inventory Management**    **Access** the Excel Templates for Chapter 11 (Attached)  **Complete** problems 4,6,7 and 13 in Chapter 11  **Post** your answers to the Practice Problems Discussion Board for week 6.  *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 6.2, 6.3, 6.4 | 2 hours |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week Six Resources Quiz**  When you have completed your reading and review of all of the week’s required resources, you will be tested on your knowledge of the concepts and ideas presented in the required materials.  **Complete** the Week Six Resources Quiz by 11:59 p.m. (Eastern Time) on Sunday.  *Note*. This quiz is open book and open note and counts for 10 points. | |  |  |
| **Discussion: Managing Inventory**  Hospitals face a difficult and expensive problem in determining the amount and types of blood to stock to meet their patients’ needs.  **Write** a response to the following prompt in the “Managing Inventory” discussion forum:   * Describe the key factors that need to be considered for a hospital managing their blood inventory. As part of your analysis, be sure to use inventory terms mentioned in the text and lectures.   *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 6.1 | 1 hour |
| **Assignment: ABC Analysis Problem**  **Resources: ABC Assessment Problem Data, ABC Inventory Template**  **Perform** an ABC inventory analysis on the data in the ABC Assessment Problem Data handout using the ABC Inventory Template.  **Write** a 100-word summary of the inventory items that are A items, B items, and C items for this company.  **Submit** your Inventory Analysis Spreadsheet and the summary to your instructor via Blackboard by 11:59 p.m. (Eastern Time) on Sunday. | | 6.2 | .5 hours |
| **Assignment: Economic Order Quantity**  **Resource:** Excel Templates MBA640.xlsx  **Access** the EOQ Excel Template from Coursemate**.**  **Read** the following scenario:  “Simpson Electronics manufactures generators and orders the component parts from a supplier. Simpson averages 1,200 units per month. They have a $35 per order cost and a $2.00 per unit item cost with a 20% inventory holding costs. Simpson operates 250 days per year and the lead time for an order is 5 days. Simpson currently places orders for quantities of 1200 units once per month.”  Note: The Excel template can be used.  **Write** a 250-word report for Simpson Electronics that will compute a new economic order quantity and the reorder point, and include the following information in your report:   * Identify how much annual savings will result from using the economic ordering quantity versus ordering 1,200 units per month * Illustrate your computations for the re-order point and the annual savings   **Submit** your report to your instructor via Blackboard by 11:59 p.m. (Eastern Time) on Sunday. | | 6.3 | .5 hours |
| **Assignment: Single Period Inventory**  **Access** the Single Period Inventory Excel Template (Attached)  **Read** the following scenario:  “McSwain’s Appliance Store sells portable air conditioners. Each air conditioner costs $80 when purchased from its supplier in China. McSwain’s plans to sell the air conditioners at a price of $125. Any air conditioners that McSwain’s cannot sell by the end of the season will be sold to a wholesaler for $50. Assume that the quantity of units sold follows a normal distribution with a mean of 30 units and a standard deviation of 8 units.”  **Write** a 100-word summary of your recommendations for McSwain’s, including the following:   * Compute the optimal number of units that McSwain’s should order for the upcoming season. * Estimate the probability that McSwain’s will sell the entire amount that it orders.   **Submit** your summary to your instructor via Blackboard by 11:59 p.m. (Eastern Time) on Sunday. | | 6.4 | .5 hours |
| **Total** |  |  |  |

# Faculty Notes

The learning activities and assignment this week are designed to allow students to explain the basic concepts of supply chain management.

# Assignments

* **Discussion questions:** The questions encourage students to consider and develop their thoughts on the question topics, share their thoughts with the class, and gain perspective by reading the responses of other class members.
* **Weekly Resource Quizzes:** These quizzes are included as a self-check for students to allow them to gauge their comprehension of the course materials as they move through the course.
* **Practice Exercises: Inventory Management:** This practice exercise will help develop the students to complete the problems and activities in the text through collaborative learning environment to aid to completion of graded assignments.
* **Assignment: ABC Analysis Problem:** This assignment requires students to apply the Pareto Principle to categorize inventory items or SKUs into three groups according to their total annual dollar usage
* **Assignment: Economic Order Quantity:** This assignment requires students use the classic economical model to determine the Economic Order Quantity to minimize total cost
* **Assignment: Single Period Inventory:** This assignment requires students to determine inventory based on uncertain demand.

# Content Outline

Please use this Content Outline to guide students through the course material.

**Chapter 11**

1. Explain the importance inventory, types of inventories, and key decisions and costs
   1. Types of Inventory
      1. Raw materials
      2. Component parts
      3. Subassemblies
      4. Works-in-process
      5. Finished-goods inventory
      6. Safety Stock
   2. Decisions and Costs
      1. Ordering or Set-up Costs
      2. Inventory-holding costs
      3. Shortage costs
      4. Unit costs of the SKUs
2. Describe the major characteristics that impact inventory decisions
   1. Number of items
   2. Nature of Demand
   3. Number and Duration of Time Periods
   4. Lead Time
   5. Stockouts
3. Describe how to conduct an ABC analysis.
   1. “A” items – large dollar value; small percentage of total items
   2. “B” items – small dollar value; large percentage of total items
   3. “C” items – items between A and C
4. Explain how a fixed-order-quantity inventory system operates and how to use the economic ordering quantity (EOQ) and safety stock models
   1. Fixed Order Quantity
      1. Inventory position
      2. Reorder point
   2. EOQ
      1. Only a single item is considered
   3. Safety Stock
      1. Buffer inventory
5. Explain how a fixed-period inventory system operates
   1. Time intervals between reviews
   2. Replenishment level
6. Describe how to apply the single inventory- period inventory model
   1. Order placed where demand is uncertain
   2. Costs
      1. Underestimating Demand
      2. Overestimating Demand

|  |  |  |  |
| --- | --- | --- | --- |
| Week Seven: Quality | |  |  |
| ***Learning Objectives*** | | ***Alignment*** | |
| * 1. Define and explain the concept of quality. | | CLO 1 | |
| * 1. Define the contributions of Deming, Juran, Crosby, ISO 9000, and Six Sigma to quality improvement. | | CLO 1 | |
| * 1. Identify and categorize costs of quality. | | CLO 1 | |
| * 1. Utilize quality control tools to describe quality problems. | | CLO 3 | |
| ***Resources, Activities, and Preparation***  *Utilize these resources and complete these activities in preparation for your graded assignments.* | | ***Alignment*** | ***AIE*** |
| **Week Seven Reading**  This week, you will be reading Chapter 15. You will be learning the basics of Operations Management how the philosophies of Deming, Juran and Crosby still play a role in modern day Operations Management.  **Read** Ch. 15 of *OM 6*.  After studying these chapters, you should be able to:   * Explain the concepts and definitions of quality * Describe the quality philosophies and principles of Deming, Juran and Crosby * Explain the GAP model and its importance. * Describe the concepts and philosophy of ISO 9000-2000 * Describe the philosophy and methods of Six Sigma * Explain the categories of cost-of-quality measurement * Describe how to apply the Seven QC Tools * Explain the concepts of kaizen and poka-yoke. | | 6.1, 6.2, 6.3, 6.4 |  |
| **Lecture: Quality Management**  **Watch** the “Quality Management” lecture video, available on Vimeo (16:38): <http://vimeo.com/77453745>  **Post** any questions, comments, or insights you may have about the content of the lecture in the Week Seven General Q&A discussion forum on Blackboard. | | 6.1, 6.2, 6.3, 6.4 | Lecture Activity – reviews lecture and posts response =  **1 hour** |
| **Practice Activity: Quality: Costs & Problems**  **Resource:** Excel Templates MBA640.xlsx  **Access** the CourseMate Excel templates for Chapter 15.  **Complete** Problems & Activities 9, 11, & 12 from Chapter 15 of the text.  **Submit** your completed Excel worksheets along with your evaluations in a Word document to the Quality discussion board.  *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 6.3, 6.4 | Practice – peer and instructor feedback, shared posting and response =  **1 hour** |
| ***Graded Assignments***  *Complete these graded assessments by the end of the week unless specified otherwise.* | | ***Alignment*** | ***AIE*** |
| **Week Seven Resources Quiz**  When you have completed your reading and review of all of the week’s required resources, you will be tested on your knowledge of the concepts and ideas presented in the required materials.  **Complete** the Week Seven Resources Quiz.  *Note*. This quiz is open book and open note and counts for 10 points. | |  |  |
| **Wiki Activity: Quality Costs Wiki**  **Review** the Quality Costs Wiki for the four major categories.    **Provide** specific examples of quality costs for a fast-food restaurant in each category.  **Review** the examples selected by your classmates for any errors or further improvements. | | 6.3 | Wiki – shares work and posts response =  **1 hour** |
| **Discussion: Measuring Defects**  **Select** a business with which you are familiar.  **Write** a response to the following prompts in the “Measuring Defects” discussion forum no later than 11:59 p.m. [EST] on Thursday:   * Describe how defects in products and processes can be measured. * Include in your description five things that can be measured with regard to quality.   *Note*. Initial answers to the discussion question must be substantive and in the range of 250-400 words. Any references should be properly cited following APA formatting guidelines. Initial discussion question responses are due by 11:59 p.m. (Eastern Time) on Thursday.  **Write** a substantive response to a minimum of three different students, focusing on additional elements in their selected business that can be measured. All responses must be posted by 11:59 p.m. (Eastern Time) on Sunday. | | 6.1 | Discussion Board – one posting and replying to three other posts =  **1 hour** |
| **Assignment: Cost of Quality Analysis**  **Resource:** Excel Templates MBA640.xlsx  Jones and Hunt manufactures custom-made fiberglass tanks. They have identified the following costs related to quality:   |  |  | | --- | --- | | Quality Measure | Cost | | Tools and equipment to measure conformance to specifications | $35,000 | | Test and inspect finished tanks | $22,000 | | Scrap fiberglass | $68,000 | | Product rework for problems identified in final inspection | $58,000 | | Reductions in price for not meeting customer expectations | $38,000 | | Quality improvement planning | $12,000 | | Employee training for quality | $5,000 | | Warranty repairs | $25,000 | | Other waste | $10,000 |   **Organize** these costs into a Pareto chart with the following categories:   * Prevention * Appraisal * Internal failure * External failure   **Write** a 250- to 500- word paper in which you:   * Recommend to Jones and Hunt where they can save quality costs. * Describe the Pareto chart and its effect on your decision making process   **Submit** your report to your instructor via Blackboard. | | 6.3, 6.4 | Problem Solving Scenario – one analysis and posting = **.5 hours** |
| **Week Seven Case Study: Hudson Jewelers**  **Read** “Hudson Jewelers Case Study” **(Case Study Attached)**  **Write** a 350- to 700-word paper analyzing Hudson Jewelers.  **Include** the following in your paper:   * What cost-of-quality criteria (i.e., prevention, appraisal, internal failure, and external failure costs) might be included in an analysis at the following stages of global diamond supply chain – mining, cutting and polishing centers, and retail jewelry store? Explain. Provide examples.   **Submit** your evaluation in a Word document to your instructor via Blackboard. | | 6.4 | Case Study – analysis for assessment = **1 hour** |
| **Assignment: Quality Improvement Analysis**  **Write** a 350-word analysis of the contributions to quality improvement from the different theories and theorists discussed in Chapter 15 based on a company that you are familiar with.  Select one of the theorists or theories such as:   * Deming * Juran * Crosby * ISO 9000 * Six Sigma   *Note*. These theories and others can be found in your textbook.  **Submit** your assignment in a Word document to your instructor via Blackboard. | | 6.2 | Log – one private posting = **.5 hours** |
| **Total** |  |  |  |

# Faculty Notes

The learning activities and assignments are designed to introduce students to the concepts of quality and quality improvement. Students will need to know contributions to quality of Deming, Crosby, Juran, Six Sigma, and ISO 9000.

# Assignments

## Required

* **Discussion questions/Wiki Activity/Practice Problems:** The questions encourage students to consider and develop their thoughts on the question topics, share their thoughts with the class, and gain perspective by reading the responses of other class members.
* **Hudson Case Study:** In this course, the students will be following the Hudson Jeweler’s case study. They’ll be asked to complete assignments on a per chapter basis relevant to the weekly readings.
* **Weekly Resource Quizzes:** These quizzes are included as a self-check for students to allow them to gauge their comprehension of the course materials as they move through the course.
* **Cost of Quality:** This exercise requires the students to identify and classify quality costs into four categories. These categories are placed into a Pareto chart to help identify areas for improvement.
* **Quality Improvement:** This assignment asks students to summarize the contributions to quality of Deming, Crosby, Juran, Six-Sigma, and ISO 9000. The student also has to apply their principles to a company of their choice.

## Supplemental:

# Content Outline

Please use this Content Outline to guide students through the course material.

**Chapter 15**

1. Explain the concepts and definitions of quality
   1. Quality
   2. Quality of conformance
   3. Specifications
   4. Service Quality
2. Describe the quality philosophies and principles of Deming, Juran and Crosby
   1. Deming–1
      1. 14 Points
   2. Juran
      1. Quality planning
      2. Quality control
      3. Quality improvement
   3. Crosby
      1. Quality is free
      2. No quality problems, only functional problems
      3. Good quality is always cheaper
   4. Six Sigma
      1. Find and eliminate causes of error
      2. Measurement
      3. Training
      4. Deployment
3. Explain the GAP model and its importance.
   1. Several ways to mismanage the creation and delivery of high levels of quality
4. Describe the concepts and philosophy of ISO 9000-2000
   1. 1—customer-focused organization: focus on customer needs
   2. 2—leadership: create unity of purpose
   3. 3—involvement of people
   4. 4—process approach: define activities, assign responsibility, etc.
   5. 6—continual improvement: must always be an organization’s objective
   6. 7—factual approach to decision making: analysis of data and information
   7. 8—mutually beneficial supplier relationships: businesses have symbiotic relationships with their suppliers.
5. Describe the philosophy and methods of Six Sigma
   1. Find and eliminate causes of error
   2. Measurement
   3. Training
   4. Deployment
6. Explain the categories of cost-of-quality measurement
   1. Prevention
      1. Quality planning
      2. Process control
      3. Information systems cost
   2. Appraisal costs
      1. Test and inspection
      2. Instrument maintenance costs
      3. Process measurement and process control costs
   3. Internal failure costs
      1. Scrap and rework
      2. Cost of corrective action
      3. Downgrading costs
      4. Process failures
   4. External failure costs
      1. Customer complaints and returns
      2. Goods and services recall costs and warranty services
      3. Product liability costs
7. Describe how to apply the Seven QC Tools
   1. Flowcharts
   2. Run and Control charts
   3. Check sheets
   4. Histograms
   5. Pareto charts
   6. Cause and effect diagrams
   7. Scatter Diagrams

# Breakdown of Academic Instructional Equivalencies

|  |  |
| --- | --- |
|  | **AIE Hours** |
| **Week 1** |  |
| Required | 8.5 |
| Supplemental | 2 |
| **Week 2** |  |
| Required | 7.5 |
| Supplemental | 2 |
| **Week 3** |  |
| Required | 6.5 |
| Supplemental | 0 |
| **Week 4** |  |
| Required | 6.5 |
| Supplemental | 1 |
| **Week5** |  |
| Required | 5.5 |
| Supplemental | 0 |
| **Week 6** |  |
| Required | 5.5 |
| Supplemental | 0 |
| **Week 7** |  |
| Required | 6 |
| Supplemental | 1 |
|  |  |
| **Total Required Hours** | 46 |
| **Total Supplemental Hours** | 6 |
| **Total Hours** | 52 |