Southern New Hampshire University

QSO 300 Final Project Guidelines and Rubric

Overview

The final project for this course is the creation of a **comprehensive case study analysis.** Every business—whether a beauty salon, automobile manufacturer, or professional baseball team—has an operations component that creates goods and services by transforming inputs into outputs. There are a wide variety of tools and techniques that operations managers draw upon to increase efficiency and effectiveness, creating value for customers. Operations management professionals are in high demand across a variety of industries. Having basic knowledge of operations functions and their integration capabilities is critically important in the world of business. For example, applying the limitations of production in marketing and sales is a routine task. Managing the equipment and supplies needs of operations management is a basic skill looked for in finance and accounting workers.

For your final assessment in this course, you will analyze a case study that addresses several key operations management fundamentals. You will use the tools and techniques that operations managers use and incorporate your instructor's feedback into the final summative analysis. You will address the typical problems that operations managers face using the knowledge you have gained from this course. Finally, you will discuss the emerging concepts of sustainability in business management, specifically the topics of corporate responsibility and environmental compliance.

The project is divided into **three milestones**, which will be submitted at various points throughout the course to scaffold learning and ensure quality final submissions. These milestones will be submitted in **Modules Two, Four, and Five. The final project is due in Module Seven.**

In this assignment, you will demonstrate your mastery of the following course outcomes:

- Evaluate the influence of operations functions on generating value for a firm and its customers
- Explain theories and techniques used by operations managers for informing production processes
- Accurately apply problem-solving and decision-making skills to real-world problems using quantitative and qualitative methodologies
- Integrate emerging principles into operations management functions by addressing corporate responsibility and environmental sustainability

Prompt

Using the knowledge you have gained from this course, you will write a comprehensive analysis of the Nissan case study we have been analyzing throughout this course by addressing the critical elements below.

Imagine that you are hired into the role of the operations manager at the company described in the case study. Although there are many issues facing the company, you have some experience and are well qualified to provide direction in solving these problems. To address many of the questions below, you will want to review your submissions from previous modules and incorporate instructor feedback. Using the case study, course materials, and outside sources, prepare a cohesive case study analysis for submission as one document.

Specifically, the following **critical elements** must be addressed:

I. Generating Value

A. Evaluate how the company in the case study uses operations management **functions** to provide products and generate value for its customers. Support your claims with examples from the case study or outside sources.

B. Assess how this company achieves a **competitive advantage** using operations management. Provide examples found in the case study or outside sources to support your reasoning.

C. **Compare and contrast** service operations and manufacturing operations at the company in the case study. How are they the same? How do they differ? How does each of these operations provide value for their customers?

II. Theories and Techniques

A. Explain how **gross-to-net** calculations are processed for material requirements planning (MRP). What specific input files would the company in the case study need to include in this process for a successful MRP? How would you use the MRP information to improve the operations as the manager of this company?

B. **Compare and contrast** the critical path method (CPM) and the program evaluation and review technique (PERT). What types of projects at this company would favor PERT over CPM? Why? What types of projects at this company would favor CPM over PERT? Why?

C. Explain the **four primary** priority rules for job sequencing. In what instances at the company might each rule be most advantageous? When would each rule be most disadvantageous? Support your claims with citations from your textbook or outside sources.

D. Explain the five steps of the **theory of constraints** (TOC) process. To what processes might the company in the case study apply TOC? Why would applying TOC to these processes be advantageous?

E. Explain the steps used to develop a **forecasting system**. How would these steps be specifically utilized by this company? What do you predict would be the result of implementing a forecasting system for the top-selling product line at this company?

F. List the major categories of **supply chain risk** and associated risk-reduction tactics. How could the company mitigate exposure to supply chain disruptions caused by natural disasters? For example, consider the 2011 earthquake and tsunami that devastated parts of Japan.

G. **Summarize** the following theories: just in time (JIT), Toyota Production System (TPS), and Lean. How are these concepts related? Describe the advantages and disadvantages for using each of these concepts at the company presented in the case study.

H. Describe how **total quality management** (TQM) principles and tools can be used to improve quality in the latest line of products in the context of the case study.

III. Data Analysis

A. Draw a hypothetical **process** (time-function) **map** for producing a recently released (within the past two years) product manufactured by the company. As an operations manager, how will you use the value map? Be sure to include your process map within your case study analysis.

B. Draw a cause-and-effect **diagram** that assesses why some of the company's supply chain partners might have struggled to implement some of the company's newly developed materials. Summarize your findings from the diagram.

C. Considering the **data** and options below, determine where the company should locate its new manufacturing plant. Explain why this would be the favorable location.

Factor	Weight	Mexico City	Columbia, SC
Political Risk	.25	70	80
Transportation Costs	.20	40	90
Labor Productivity	.20	85	75
Rental Costs	.15	90	55
Labor Costs	.10	80	50
Taxes	.10	90	50

D. The company believes that it might have some inefficiencies in its **inventory management** process. Develop an ABC classification system for the following 10 items. Based on this information, what do you recommend for improving inventory management?

Item	Annual Demand	Cost/Unit
I5	1750	10.00
D1	6000	10.00
A2	3000	50.00
E9	1000	20.00
J8	2500	5.00
C7	1500	45.00
B8	4000	12.00
G2	300	1500.00
H2	600	20.00
F3	500	500.00

IV. **Sustainability**
   A. Describe how the emerging concept of the **triple bottom line** can be used to enhance operations management at the company. Be sure to address each component of the triple bottom line.
   B. Explain how the company integrates **ISO 14000** standards in its manufacturing plants. Support your explanation with citations from your textbook or outside sources.
   C. Describe ways through which the company can integrate **corporate responsibility** principles into their operations. Which of these do you believe to be the most effective? Why? Support your opinions with citations from your textbook or outside sources.

Milestones

Milestone One: *Managing Operations*
In **Module Two**, you will submit a **managing operations case study analysis**, which evaluates how Nissan uses operations management functions to provide products and generate value for its customers and how it achieves a competitive advantage using operations management, among other critical elements. To complete this milestone, you will use the Nissan case study, your own independent research, and the course materials. **This milestone is graded with the Milestone One Rubric.**

Milestone Two: *Quality, Process, and Location Analysis*
In **Module Four**, you will submit a **quality, process, and location analysis case study analysis** that addresses the typical problems that operations managers face. To complete this milestone, you will use the Nissan case study, your own independent research, and the course materials. **This milestone is graded with the Milestone Two Rubric.**

Milestone Three: *Sustaining Operations*
In **Module Five**, you will submit a **sustaining operations case study analysis** that discusses the emerging concepts of sustainability in business management, specifically the topics of corporate responsibility and environmental compliance. To complete this milestone, you will use the Nissan case study, your own independent research, and the course materials. **This milestone is graded with the Milestone Three Rubric.**

Final Submission: *Comprehensive Case Study Analysis*
In **Module Seven**, you will submit your final **comprehensive case study analysis**. It should be a complete, polished artifact containing **all** of the critical elements of the final product. It should reflect the incorporation of feedback gained throughout the course. If you have not included it already, be sure that this final submission includes an introduction section, which provides an overview of the company and some of the key challenges that it is facing. Also, be sure to include a summary/conclusion section that highlights some of your most important recommendations for improving operations at the company. **This will be graded using the Final Project Rubric.**

Deliverable Milestones

Milestone	Deliverables	Module Due	Grading
1	Milestone One: *Managing Operations*	Two	Graded separately; Milestone One Rubric
2	Milestone Two: *Quality, Process, and Location Analysis*	Four	Graded separately; Milestone Two Rubric
3	Milestone Three: *Sustaining Operations*	Five	Graded Separately; Milestone Three Rubric
	Final Product: Comprehensive Case Study Analysis	Seven	Graded separately; Final Project Rubric

Rubric

Guidelines for Submission: Written components of projects must follow these formatting guidelines when applicable: double spacing, 12-point Times New Roman font, one-inch margins, and citations in APA style. This assignment should be 10–12 pages in length, not including cover page and resources.

Critical Elements	Exemplary (100%)	Proficient (85%)	Needs Improvement (55%)	Not Evident (0%)	Value
Generating Value: Functions	Meets "Proficient" criteria and directly ties specific OM activities to actual measures of customer satisfaction related to the case study	Evaluates how the company in the case study uses OM functions to provide products to customers and to generate value and provides support	Evaluates how the company in the case study uses OM functions to provide products to customers and to generate value but does not provide support	Does not evaluate how the company in the case study uses OM functions to provide products to customers	5
Generating Value: Competitive Advantage	Meets "Proficient" criteria and provides additional real-world examples of times when the company in the case study out-performed a competitor	Accurately assesses how the company in the case study achieves a competitive advantage using OM and provides support	Assesses how the company in the case study achieves a competitive advantage using OM but assessment is inaccurate or does not provide support	Does not assess how the company in the case study achieves a competitive advantage using OM	5
Generating Value: Compare and Contrast	Meets "Proficient" criteria and addresses implications of strategic OM decisions for both service and manufacturing	Compares and contrasts service and manufacturing operations and includes how each operation provides value for its customers	Compares and contrasts service and manufacturing operations but does not include how each operation provides value for its customers	Does not compare and contrast service and manufacturing operations	5
Theories and Techniques: Gross-to-Net	Meets "Proficient" criteria and integrates additional organizational functions that affect inputs to and outcomes of MRP	Correctly explains how gross-to-net calculations are processed for MRP and identifies the specific input files needed and how the company uses the MRP information	Correctly explains how gross-to-net calculations are processed for MRP but does not identify the specific input files needed or how the company uses the MRP information	Does not correctly explain how gross-to-net calculations are processed for MRP or explanation is incorrect	5
Theories and Techniques: Compare and Contrast	Meets "Proficient" criteria and supports explanation with concrete real-world examples	Compares and contrasts CPM and PERT and explains which projects would favor each technique	Compares and contrasts CPM and PERT but does not explain which projects would favor each technique	Does not compare and contrast CPM and PERT	5
Theories and Techniques: Four Primary	Meets "Proficient" criteria and explains a situation where a hybrid approach might work best	Accurately explains the four primary priority rules for job sequencing, explaining where each rule would be most advantageous/disadvantageous and provides support	Accurately explains the four primary priority rules for job sequencing, but does not explain where each rule would be most advantageous and disadvantageous or does not provide support	Does not explain the four primary priority rules for job sequencing or explanation is inaccurate	5

Theories and Techniques: Theory of Constraints	Meets "Proficient" criteria and predicts the results of applying TOC to specific processes in the case study	Correctly explains the five steps of TOC and explains why it would be advantageous to apply TOC to specific processes in the case study	Correctly explains the five steps of TOC but does not explain why it would be advantageous to apply TOC to specific processes in the case study	Does not explain the five steps of TOC or explanation is incorrect	5
Theories and Techniques: Forecasting System	Meets "Proficient" criteria and defends prediction with support	Accurately describes the steps used to develop a forecasting system and predicts the results of using a forecasting system in the context of the case-study	Accurately describes the steps used to develop a forecasting system but does not predict the results of using a forecasting system in the context of the case study	Does not describe the steps used to develop a forecasting system or description is inaccurate	5
Theories and Techniques: Supply Chain Risk	Meets "Proficient" criteria and provides support for explanation	Correctly lists the major categories of supply chain risks and associated risk-reduction tactics and explains how the company could avoid exposure to supply chain disruptions	Correctly lists the major categories of supply chain risks and associated risk-reduction tactics but does not explain how the company could avoid exposure to supply chain disruptions	Does not list the major categories of supply chain risks and associated risk-reduction tactics or list and associated risks are incorrect	5
Theories and Techniques: Summarize	Meets "Proficient" criteria and describes how a specific process could be leaned at the company	Summarizes JIT, TPS, and Lean and explains how the concepts are related, integrating the advantages/disadvantages of using each in the case-study context	Summarizes JIT, TPS, and Lean but does not explain how the concepts are related, integrating the advantages/disadvantages of using each in the case-study context	Does not summarize JIT, TPS, or Lean	5
Theories and Techniques: Total Quality Management	Meets "Proficient" criteria and integrates Deming's points into the discussion	Describes how TQM can be used to improve quality in the context of the case study	Describes how TQM can be used to improve quality but does not provide context in the case study	Does not describe how TQM can be used to improve quality	5
Data Analysis: Process Map	Meets "Proficient" criteria and description of map's use demonstrates insight into the importance of OM tools	Accurately draws and includes a process map for product and thoroughly describes how it would be used by an OM manager	Draws and includes a process map for product, but drawing is inaccurate, and description of how it would be used by OM manager is either not thorough or missing	Does not draw and include a process map for a product	5
Data Analysis: Diagram	Meets "Proficient" criteria and explains what could be done to encourage supply chain partners to comply with new requirements	Properly draws a cause-and-effect diagram assessing the struggle to implement newly developed materials and summarizes findings	Properly draws a cause-and-effect diagram assessing the struggle to implement newly developed materials but does not summarize findings	Does not properly draw a cause-and-effect diagram	5

Data Analysis: Data	Meets "Proficient" criteria and explains additional criteria that might also need to be considered	Correctly determines where the new plant should be located and explains why this is a favorable location	Correctly determines where the new plant should be located but does not explain why this is a favorable location	Does not correctly determine where the new plant should be located	5
Data Analysis: Inventory Management	Meets "Proficient" criteria and justifies improvements with logical reasoning or support from outside sources	Correctly develops an ABC classification system and recommends improvements in inventory management	Correctly develops an ABC classification system but does not recommend improvements in inventory management	Does not correctly develop an ABC classification system	5
Sustainability: Triple Bottom Line	Meets "Proficient" criteria and provides support	Describes how the triple bottom line can enhance OM and addresses each component of the triple bottom line concept	Describes how the triple bottom line can enhance OM but does not address each component of the triple bottom line concept	Does not describe how OM can enhance triple bottom line	5
Sustainability: ISO 14000	Meets "Proficient" criteria and describes additional environmental policies and standards	Accurately explains how the company integrates ISO 14000 standards in the manufacturing plants and provides support	Explains how the company integrates ISO 14000 standards in the manufacturing plants but does not provide support or explanation is inaccurate	Does not explain how the company integrates ISO 14000 standards in the manufacturing plants	5
Sustainability: Corporate Responsibility	Meets "Proficient" criteria and support includes research on the best practices in corporate responsibility	Describes ways the company can integrate corporate responsibility principles into operations and defends opinion of the most effective way with support	Describes ways the company can integrate corporate responsibility principles into operations but does not defend opinion of the most effective way with support	Does not describe ways the company can integrate corporate responsibility principles into operations	5
Articulation of Response	Submission is free of errors related to citations, grammar, spelling, syntax, and organization and is presented in a professional and easy-to-read format	Submission has no major errors related to citations, grammar, spelling, syntax, or organization	Submission has major errors related to citations, grammar, spelling, syntax, or organization that negatively impact readability and articulation of main ideas	Submission has critical errors related to citations, grammar, spelling, syntax, or organization that prevent understanding of ideas	10
				Earned Total	**100%**