



Date		Credits	3 Credits
Course Title	Operations and Supply Chain Management.	Course Number	MA 30310
Pre-requisite (s)	GEB 1011	Co-requisite (s)	None
Hours	45 Hours		

Place and Time of Class Meeting

**San Ignacio University
3905 NW 107 Avenue, Suite 301
Miami, FL 33178**

Name and Contact Information of Instructor

Book required

(The Institution recognizes the use of the textbook in the classroom as part of the educational methodology and strategy applied in diverse materials. The textbook is part of the curriculum and is used to reach the student in an effective manner in the classroom. Every student is expected to acquire and use the textbook.)

Introduction to Operations and Supply Chain Management (4th Edition)
Cecil C. Bozarth and Robert B. Handfield
©2016 | Pearson Prentice Hall | Published: 12/27/2014
ISBN-10: 0133871770| ISBN-13: 9780133871777

Classroom expectations for students

Attendance Policy

Students are expected to attend all scheduled university classes for the courses that they are registered for and to achieve the goals set forth by each class instructor. Attendance is taken daily. Enrolled students are permitted no more than **2** “free” absences in one semester. Students missing **3-5** classes over the course of the semester will receive a one-letter grade deduction from their final course grade; missing more than **6** classes will result in failure of the course regardless of grade average. It is the student's responsibility to arrange to make up work missed because of an absence.

Student Tardiness Policy

A student is considered tardy/late if he/she comes to class 15 minutes late. With three tardies the student accumulates one full absence. If the student misses half of the class period, it is a full



absence. When a student has more than 6 tardies, the instructor will contact the San Ignacio University Coordinator of Student Affairs and Academic Department and request an intervention session with the student. The goal of the intervention session is to develop and implement an intervention program to help students learn new ways to save and manage time.

NOTE: Plagiarism is defined as the use, without proper acknowledgment, of the ideas, phrases, sentences, or larger units of discourse from another writer or speaker. Plagiarism includes the unauthorized copying of software and the violation of copyright laws. Students who commit plagiarism will obtain a grade of “Failure” on their exam or assignment.

Course Description (must correspond exactly to Catalog description)

The purpose of this class is to provide students with the knowledge in operations management and core supply chain management, as well as the relationship between the two. The students will be expected to make connections between value operations, supply chains, operations environment, planning, controlling operations and supply chain.

Learning Objectives

At the end of this course the student will be able to:

- To define operations and supply chain management.
- To explain and apply operations and supply chain strategies.
- To interpret and use business processes.
- To summarize the management of quality.
- To put into practice the managing of projects.
- To plan the development of products and services.
- To interpret process choice and layout decisions in manufacturing and services.
- To explain managing capacity.
- To put into their own words the advanced waiting line theory and simulation modeling.
- To define forecasting.
- To describe sourcing decisions.
- To analyze purchasing.
- To schematize logistics.
- To describe sales and operations planning.
- To put into practice managing inventory throughout the supply chain.
- To put into practice managing production across the supply chain.
- To explain supply chain information systems.
- To define JIT/Lean production.

Topical Outline and Schedule



DATE:		WEEK 1
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Define operations function. • Describe why operations function is so critical to an organization's survival. • Describe what a supply chain is and how it relates to a particular organization's operations function. • Discuss what is meant by operations management and supply chain management. • Identify some of the major operations and supply chain activities, as well as career opportunities in these areas. • Create a case for studying both operations management and supply chain management. 	
TOPIC (S)	<p>Syllabus Discuss Library Orientation Course, Instructor to verify completion.</p> <ul style="list-style-type: none"> • Discuss the importance of operations and supply chain management. • Analyze important trends. • Evaluate and interpret the Supply-Chain Operations Reference (SCOR) Model. • List the potential career paths in operations and supply chain management. • Recall the major operations and supply chain activities. • Evaluate the cross-functional and interorganizational linkages. 	
LEARNING ACTIVITIES	<p>Discussion of Syllabus. Chapter topic discussion. Discussion questions p.15</p>	
HOMEWORK & ASSIGNED READINGS	<p>Review the Syllabus Complete the Library Orientation Course. Instructor to verify completion. Homework: Read Chapter 1 pp.1-14 Case study questions p. 15</p>	
DATE:		WEEK 2
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Describe explain the relationship between business strategies and functional strategies and the difference between structural and infrastructural elements of business. • Describe some of the main operations and supply chain decisions categories. • Explain the concept of customer value and calculate a value index score. • Differentiate between customers' order winners and qualifiers and explain why this difference is important to developing operations and supply chain strategy for a firm. • Discuss the concept of trade-offs among performance dimensions and give an example. 	



	<ul style="list-style-type: none"> Define core competencies and give an example of how core competencies in the operations and supply chain areas can be used for a competitive advantage. Explain the importance of strategic alignment and describe the four stages of alignment between the operations and supply chain strategy and the business strategy.
TOPIC (S)	<p>Discuss Final Class Project & Presentation,</p> <ul style="list-style-type: none"> Define the elements of business. Define strategy. Analyze a top-down model of strategy. Describe operations and supply chain strategies. List the operations and supply chain decisions categories. List and describe the four performance dimensions.
LEARNING ACTIVITIES	<p>Power Point presentation Chapter topic discussion Discussion questions p. 33</p>
HOMEWORK & ASSIGNED READINGS	<p>Homework: Read Chapter 2 pp. 18-31. Problems 1-4 p. 34-35.</p>
DATE: WEEK 3	
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> Explain what a business process is and how the business perspective differs from a traditional, functional perspective. Create a process maps for a business process and use these to understand and diagnose a process. Calculate and interpret some common measures of process performance. Discuss the importance of benchmarking and distinguish between competitive benchmarking and process benchmarking. Describe the Six Sigma methodology, including the steps of the DMAIC process. Use and interpret some common continuous improvement tools.
TOPIC (S)	<p>Discussion of student topic selection, library research, tentative bibliography.</p> <ul style="list-style-type: none"> Define business processes. Discuss examples of business processes. Describe the process of mapping. Summarize managing and improving business processes. Define the Six Sigma methodology. Explain what the Supply-Chain Operations Reference (SCOR) model is, and why it is so important to businesses.
LEARNING ACTIVITIES	<p>Participate in a forum. Pair-share activity: Discussion questions. Analysis of pair-share activity.</p>



HOMEWORK & ASSIGNED READINGS	Investigate concepts and kinds of objectives. Library Research. Develop Tentative Bibliography Due: Project Topic Due: Tentative Bibliography Homework: Read Chapter 3 pp. 37-62. Exercises: 1-10 p. 66-68. Homework: Read Chapter 4 pp.71-98 Exercises: 1-11 p. 101-102
DATE: WEEK 4	
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Discuss the various definitions and dimensions of quality and why quality is important to operations and supply chains. • Describe the different costs of quality, including internal and external failure, appraisal, and prevention costs. • Explain what TQM is, along with its seven core principles. • Devise process capability ratios and indices and set up control charts for monitoring continuous variables and attributes. • Describe the key issues associated with acceptance sampling, as well as the use of Operating Characteristics (OC) curves. • Distinguish between Taguchi's quality loss function and the traditional view of quality.
TOPIC (S)	Due: Project Topic Due: Tentative Bibliography <ul style="list-style-type: none"> • Define quality. • List the dimensions of quality for a good and for a service. • Analyze the total cost of quality. • Describe total quality management. • Analyze statistical quality control. • Evaluate managing quality across the supply chain.
LEARNING ACTIVITIES	Case study questions p. 137 Activity led by instructor. Chapter topic discussion.
HOMEWORK & ASSIGNED READINGS	Continue research and work on final project Homework: Read Chapter 5 pp 105-128. Problems 1-11 p. 133-134.
DATE: WEEK 5	
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Explain the difference between routine business activities and projects. • Describe the five major phases of a project. • Construct a Gantt chart and interpret the results. • Construct a project network diagram and calculate the earliest and

	<p>latest start and finish times for all activities.</p> <ul style="list-style-type: none"> • Identify the critical activities and paths in a network. • Describe the Project Management Institute.
TOPIC (S)	<ul style="list-style-type: none"> • Explain the growing importance of project management. • Describe the project phases. • List and evaluate the project management tools. • List the steps in the process of constructing a network diagram. • Analyze project management software. • Recognize PMI and the Project Management Body of Knowledge (PMBOK).
LEARNING ACTIVITIES	<p>Discussion questions p. 132-133 Chapter topic discussion Power Point presentation</p>
HOMEWORK & ASSIGNED READINGS	<p>Continue research and work on final project</p> <p>Homework: Read Chapter 14 pp. 423-439. Problems 1-6 p. 442-443.</p>
DATE:	WEEK 6
SPECIFIC OBJECTIVES	<p>EXAM I</p> <ul style="list-style-type: none"> • Explain why product design is important to a business's success. • Describe the six dimensions of product design that are of particular interest to operations and supply chain managers. • Describe the five phases of product and service development. • Explain the difference between sequential development and concurrent engineering. • Discuss the different roles played by such areas as engineering and accounting during the development process. • Describe some of the more common approaches to improving product and service designs.
TOPIC (S)	<ul style="list-style-type: none"> • Describe the operations and supply chain perspectives on design. • List the six dimensions that the operations and supply chain perspective on product design will usually center on. • Explain the development process. • List the phases of product and service development. • Analyze the organizational roles in product and service development. • Describe the approaches to improving product and service designs.
LEARNING ACTIVITIES	<p>Pair-share activity: Case study questions p. 461 Group discussion Analysis of pair-share activity.</p>
HOMEWORK & ASSIGNED READINGS	<p>Read Chapter 15 pp. 445-460 Discussion questions p. 461</p>



DATE:		WEEK 7
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Describe the characteristics of the five classic types of manufacturing processes. • Explain how different manufacturing processes can be linked together via the supply chain. • Describe the critical role of customization in manufacturing, including the degree and point of customization, and upstream versus downstream activities. • Discuss the three dimensions that differentiate services from one another-the service package, customization, and customer contact-and explain the different managerial challenges driven by these dimensions. • Create and interpret a service blueprint. • Devise product-based and functional process layouts. 	
TOPIC (S)	<ul style="list-style-type: none"> • List the some general principles to keep in mind when selecting and implementing a manufacturing process. • Describe the manufacturing processes. • Analyze the product customization within the supply chain. • Describe the service processes. • List the managerial challenges in service environments. • Explain the layout decision models. • Evaluate examples of layout decision models. 	
LEARNING ACTIVITIES	<p>Chapter topic discussion. Analysis of examples brought up in class. Discussion questions p. 66</p>	
HOMEWORK & ASSIGNED READINGS	<p>Continue research and work on final project</p> <p>Homework: Read Chapter 3 pp. 37-62. Problems 1-7 p. 66-67.</p>	
DATE:		WEEK 8
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Explain what capacity is, how it firms measure capacity, and the difference between theoretical and rated capacity. • Describe the pros and cons associated with three different capacity strategies: lead, lad, and match. • Apply a wide variety of analytical tools to capacity decisions, including expected value and break-even analysis, decision trees, waiting line theory, and learning curves. • Describe different types of waiting line systems. • Use statistic-based formulas to estimate waiting line lengths and waiting times for three different types of waiting line systems. • Explain the purpose, advantages and disadvantages, and steps of simulation modeling. 	



	<ul style="list-style-type: none"> • Create a simple Monte Carlo simulation using Microsoft Excel.
TOPIC (S)	<ul style="list-style-type: none"> • Define capacity. • Describe three common capacity strategies. • Explain the methods of evaluating capacity alternatives. • Describe advanced perspectives on capacity. • Analyze alternative waiting lines. • Analyze simulation modeling.
LEARNING ACTIVITIES	<p>Activity led by instructor Discussion questions p. 168 Discussion questions p. 186 Chapter topic discussion</p>
HOMEWORK & ASSIGNED READINGS	<p>Continue research and work on final project Homework: Read Chapter 6 pp. 139-164 and 6S pp. 173-241 Problems 1-7 p. 168-169 Problems 1-4 p. 186</p>
DATE:	WEEK 9
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Define forecasting. • Discuss the importance of forecasting. • Identify the most appropriate type of forecasting approach, given different forecasting situations. • Apply a variety of time series forecasting models, including moving average, exponential smoothing, and linear regression models. • Create casual forecasting models using linear regression and multiple regression. • Devise measures of forecasting accuracy and interpret the results.
TOPIC (S)	<ul style="list-style-type: none"> • Distinguish the different forecast types. • Summarize the laws of forecasting. • Analyze the process of selecting a forecasting method. • Describe the qualitative forecasting methods. • Explain the time series forecasting models. • Describe the casual forecasting models. • Explain the measures of forecast accuracy. • Show computer-based forecasting packages. • Explain collaborative planning, forecasting, and replenishment (CPFR).
LEARNING ACTIVITIES	<p>Group discussion Discussion questions p. 288 Chapter topic discussion</p>
HOMEWORK & ASSIGNED READINGS	<p>Continue research and work on final project Homework: Read Chapter 9 pp. 249-283 Problems 1-22 p. 288-292</p>



DATE:		WEEK 10
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Discuss the various strategic issues surrounding sourcing decisions and identify some of the key factors favoring one approach over the other. • Create a simple total cost analysis. • Define sourcing strategy. • Show how portfolio analysis can be used to identify the appropriate sourcing strategy for a particular good or service. • Show how multicriteria decision models can be used to evaluate suppliers, and interpret the results. • Discuss some of the longer-term trends in supply management and why they are important. 	
TOPIC (S)	<ul style="list-style-type: none"> • Explain sourcing decisions. • List the advantages and disadvantages of insourcing and outsourcing. • List the factors that affect the decision to insource or outsource. • Explain sourcing strategies. • Recognize some of the more qualitative criteria that a company might use in supplier evaluation. • Analyze the trends in supply management. 	
LEARNING ACTIVITIES	Power Point presentation. Case study questions p. 215 Analysis of examples brought up in class.	
HOMEWORK & ASSIGNED READINGS	Continue research and work on final project Homework: Read Chapter 7 pp. 187-211 Problems 1-6 p. 213-214	
DATE:		WEEK 11
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Create a strong case for why purchasing is a critical part of a firm's supply chain strategy. • Identify and describe the various steps of the purchasing process, and discuss how this process will vary according to the type of good or service being purchased. • Explain why spend analysis is important and perform a simple spend analysis. • Describe why logistics is important and discuss the major decisions areas that make up logistics. • List the strengths and weaknesses of the various modes of transportation. • Identify the major types of warehousing solutions and their benefits. • Discuss the purpose of logistics strategy and give examples of how logistics can support the overall business strategy. • Explain what reverse logistics systems are, and some of the unique challenges they create for firms. 	
TOPIC (S)	<ul style="list-style-type: none"> • Recognize why purchasing is critical. 	



	<ul style="list-style-type: none"> • Summarize the purchasing process. • Analyze spend analysis. • Explain logistics in the twenty-first century. • Explain why logistics is critical. • Describe the different logistic decision areas. • Analyze logistic strategy. • Analyze logistic decision models.
LEARNING ACTIVITIES	<p>Group activity led by instructor. Discussion questions p. 213 Discussion questions p. 244 Case study questions p. 215 Case Study questions p.247</p>
HOMEWORK & ASSIGNED READINGS	<p>Due: First Draft of Final Project Read Chapter 7 pp. -187-211. Read Chapter 8 pp. 217-241 Problems 1-7 p. 244-245</p>
DATE: WEEK 12	
SPECIFIC OBJECTIVES	<p>MIDTERM EXAM II</p> <ul style="list-style-type: none"> • Distinguish among strategic planning, tactical planning, and detailed planning and control. • Describe why sales and operations planning (S&OP) is important to an organization and its supply chain partners. • Create multiple alternative sales and operations plans for a firm. • Describe the differences between top-down and bottom-up S&OP and discuss the strengths and weaknesses of level, chase, and mixed production strategies. • Discuss the organizational issues that arise when firms decide to incorporate S&OP into their efforts. • Apply optimization modeling techniques to the S&OP process.
TOPIC (S)	<ul style="list-style-type: none"> • Explain S&OP in the planning cycle. • List the major approaches to S&OP. • Describe the process of organizing for and implementing S&OP. • Describe services considerations. • Recall linking S&OP throughout the supply chain. • Summarize applying optimization modeling to S&OP.
LEARNING ACTIVITIES	<p>Discussion questions p. 429 Group topic discussion Analysis of examples brought up in class</p>
HOMEWORK & ASSIGNED READINGS	<p>Read Chapter 10 pp. 294-317. Problems 1-14 p. 319-323</p>



DATE:		WEEK 13
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Describe the various roles of inventory, including the different types of inventory and inventory drivers. • Distinguish between independent demand and dependent demand inventory. • Deduce the restocking level for a periodic review system. • Deduce the economic order quantity (EOQ) and reorder point (ROP) for a continuous review system. • Deduce the best order quantity when volume discounts are available. • Describe how decisions affect other areas of the supply chain. 	
TOPIC (S)	<ul style="list-style-type: none"> • Define the role of inventory. • Analyze periodic review systems. • Analyze continuous review systems. • Analyze single-period inventory systems. • Explain inventory in the supply chain. • Define the bullwhip effect. 	
LEARNING ACTIVITIES	<p>Activity led by instructor. Chapter topic discussion. Analysis of examples brought up in class.</p>	
HOMEWORK & ASSIGNED READINGS	<p>Editing & Revision of Final Project Read Chapter 11 pp. 326-349 Case study questions p. 356-357 Problems 1-6 p. 352-353</p>	
DATE:		WEEK 14
SPECIFIC OBJECTIVES	<ul style="list-style-type: none"> • Explain the activities that make up planning and control in typical manufacturing environment. • Explain the linkage between sales and operations planning (S&OP) and master scheduling. • Describe the linkage between master scheduling and material requirements planning (MRP). • Discuss the role of production activity control and vendor order management and how these functions differ from the higher-level planning activities. • Explain how distribution requirements planning (DRP) helps synchronize the supply chain, and complete the calculations for a simple example. • Explain why information flows are a necessary part of any supply chain. • Describe in detail how supply chain information needs vary according to the organizational level and the direction of the linkages. 	
TOPIC (S)	<ul style="list-style-type: none"> • Define master scheduling. • Explain the material requirements planning. 	

	<ul style="list-style-type: none"> • Explain the production activity control and vendor order management systems. • Describe synchronizing planning and control across the supply chain. • Evaluate supply chain information needs. • Describe supply chain information systems.
LEARNING ACTIVITIES	<p>Pair-share activity: Discussion questions p. 384-385. Analysis of par-share activity. Group discussion.</p>
HOMEWORK & ASSIGNED READINGS	<p>Editing & Revision of Final Project. Read Chapter 12 pp. 358-381. Problems 1-17 p. 385-391 Discussion questions p. 384-385</p>
DATE:	WEEK 15
SPECIFIC OBJECTIVES	<p>Final Project Final Presentation Final Exam</p> <ul style="list-style-type: none"> • Define JIT/Lean. • Differentiate between the Lean philosophy and kanban systems. • Discuss the Lean perspective on waste. • Discuss the Lean perspective on inventory. • Describe how the concepts of Lean supply chain and Lean Six Sigma represent natural extensions of the Lean philosophy. • Show how MRP and kanban can be linked together and illustrate the process using a numerical example.
TOPIC (S)	<ul style="list-style-type: none"> • Analyze the Lean perspective on waste. • Describe the eight major forms of waste in an organization. • Analyze the Lean perspective on inventory. • Describe how a kanban system helps control inventory levels and synchronize the flow of goods and materials across a supply chain. • Discuss recent developments in Lean thinking. • Define kanban systems.
LEARNING ACTIVITIES	<p>Case study questions p. 548 Group discussion. Group activity led by instructor.</p>
HOMEWORK & ASSIGNED READINGS	<p>Read Chapter 14 pp. 423-439 Problems 1-6 p. 442-443</p>

Instructional Methods

In developing methodological strategies, it is best to discuss them between teachers and students in an environment of freedom and mutual agreement in order to ensure that the students make

them their own and take responsibility for their execution and for attaining the goals of this course.

The following strategies may be used in this class:

1. A review of the literature.
2. Check of the reading.
3. Analysis of assigned readings.
4. Group discussions.
5. Individual and group discussions.
6. Preparation of reports.
7. Preparation of a didactic plan.
8. Carrying out a micro-class.

Additional Instructional Materials and References

Supply Chain Management: A Logistics Perspective
by Coyle, John C.
Southwestern College Publications, 2016

Purchasing and Supply Chain Management
by Monczka, Robert
Southwestern College, 2015

Introduction to Materials Management
by Chapman, Steve
Pearson, 2016

Assessment Criteria and Methods of Evaluating Students

96 – 100%	→ A
90 – 95%	→ A-
87 – 89%	→ B+
83 – 86%	→ B
80 – 82%	→ B-
77 – 79%	→ C+
73 – 76%	→ C
70 – 72%	→ C-
67 – 69%	→ D+
63 – 66%	→ D
60 – 62 %	→ D-
< 59%	→ F

Do not count on a curve!



Generally, the grades “A” through “C-” are considered passing grades. Grades "W" and "I" indicate that no grades were earned for the course. A "W" grade indicates that the student withdrew from the course. An "I" grade indicates that the student was passing the course, but failed to complete all the required course work. The instructor, in his/her discretion may grant an "I" grade instead of an "F", pending completion of the course work by the student within a specified time arranged by the instructor and told to the student. It is the student's responsibility to follow-up with the instructor to complete the course work. If the course work is not completed by the arranged time, the “I” grade becomes an “F”.

Distribution of Grade Elements

Homework:	15% (5% each)
Exams I, II, III:	30% (10% each)
Final Presentation:	30% (15% each)
Final Research Project:	25%
Total:	100 %

Date Syllabus Was Last Reviewed: 01/09/2017