## UNIVERSITY OF SOUTHERN CALIFORNIA Marshall School of Business

## BUAD 311 - Operations Management Fall 2011

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#### **Course Description**

How do organizations such as financial institutions, health care, and manufacturing meet customer needs and stay consistent with their goals and values? How do organizations make trade-off decisions with respect to quality, cost, and time? Operations Management provides tools and methods to optimally answer these questions in a global business world.

Operations managers are primarily concerned with the design, procurement, production, and delivery of goods and services. They are responsible for the systematic planning, designing, operating, controlling and improving the various procurement, production, storage, and shipping processes involved from the time the product or service is designed till customer delivery occurs. The challenge for operations managers is to produce goods and services and deliver them in an efficient manner and in accordance with the business strategy of their company. Typically, this involves balancing the needs for satisfying customer demand, on-time delivery, lower costs, and higher quality.

In this course you will learn the fundamentals of Operations Management, enhance your managerial insight and intuition, and improve your business decisions.

More specifically, we will investigate the following aspects of Operations Management to practice decisionmaking skills:

- Process Analysis and Capacity Management.
- Managing Uncertainty.
- Optimization and Linear Programming.
- Forecasting.
- Revenue Management.
- Inventory Management and Supply Chain Coordination.

This will be accomplished through: (i) understanding of the business environment and the structure of important operational problems; (ii) analysis of the relevant principles, issues, and trade-offs; and (iii) working knowledge of relevant methodological tools, solution procedures, and guidelines.

## **Prerequisites**

Students are expected to know the basic concepts of Probability and Statistics. In addition, every student is assumed to have access to and be able to use regularly, efficiently, and effectively a word processor, e-mail, a web browser and a spreadsheet software package.

## **Textbook**

- *BUAD 311 Operations Management* (ISBN13: 978-0-697-79527-4, ISBN10: 0-697-79527-6), custommade textbook available at the bookstore. The textbook can also be purchased at <u>www.mcgrawhillcreate.com/shop</u>.
- eBook purchase instructions will be posted in Blackboard. Note: eBook has a different ISBN number.  $T_{i} = C_{i} + C_{i}$  be the structure of  $C_{i} = 2^{I_{i}}$  be the Piece Pi
- *The Goal*, Goldratt and Cox, 3<sup>rd</sup> edition, North River Press
- Other required readings are available via USC Libraries' Automated Reserve System (ARES)<sup>1</sup>.

## **Instructional Methods**

The classes will consist of lectures, discussions, simulation games, and case study analyses.

### [Case Analyses]

During the course we will analyze 4 case studies (Kristen's Cookie, West Coast University Hospital, Blue Ribbon Foods and Zara). All cases will be discussed in class. Two of the cases, Kristen's Cookie and Zara, will be analyzed individually. Two of the cases, the West Coast University Hospital and Blue Ribbon Foods, will be analyzed in teams. Each team is required to prepare a 10 minute presentation. Please submit a PowerPoint presentation file (and Excel files if applicable) by 6:00pm the day before the case discussion day. Only one or two teams will have the honor of presenting their analysis in class. Teams should be formed by the beginning of Session 5. Each team will consist of <u>5 or less</u> students.

### [Assigned Readings and Homework Assignments]

Students must complete the assigned readings and homework assignments prior to coming to class. <u>The</u> **discussion of ARES and assigned readings counts towards the participation.** Homework assignments are accepted only via Blackboard. The instructor will not accept homework assignments in class.

# [Littlefield Games]

Littlefield Laboratory Game is a competitive web-based factory simulation (<u>http://www.responsive.net</u>) by Littlefield Labs. It consists of two assignments, each lasting seven days. In each assignment the student teams will compete to make the most money by managing a factory. The first simulation game focuses on capacity management in an environment with growing demand. The second simulation game focuses on lead time and inventory management. <u>Every student must purchase a Littlefield Labs Access Code from the bookstore or directly from the vendor before Session 9.</u> Students must register their teams according to the instructions. Each team should have <u>5 or less</u> students. In addition to the Access Code, you need the following course code to register: **usc**.

### [Root Beer Game]

To understand the significance of major issues in supply chains, we play the Root Beer Game. <u>Every</u> student must purchase a license from Harvard University and register by Session 23. Details will be posted in Blackboard.

# **Grading**

The course grade, which will be curved, is based on two midterms, a cumulative final exam, in-class quizzes (there will be three quizzes, but only the best two will count towards the course grade), homework (there will be

<sup>&</sup>lt;sup>1</sup> <u>https://usc.ares.atlas-sys.com</u>

four homework assignments, but only the best three will count towards the course grade), case studies, Littlefield games, and class participation according to the following weights:

Participation	7.5%
Quizzes	10%
Homework	10%
Case analysis	7.5%
Littlefield Simulation Games	10%
Exam 1	15%
Exam 2	15%
Final Exam	25%

## There will be no other assignments.

All exams/quizzes are closed books. You are allowed to use one double-sided crib sheet (8.5x11) on each quiz/exam. <u>No make-up exams or quizzes are offered</u> – accordingly, all exams and quizzes must be taken on their assigned date and in the section in which students are registered. Students are not allowed to attend other sections – and attendance will be called randomly throughout the semester.

## **Class Participation**

It is very important for each student to actively participate in the class discussion. Read the assigned material before the class and make sure you are familiar with the main issues to be discussed in class. You will be cold-called. Your participation is evaluated mainly on the quality of your contribution and insights. I will make every effort to call on as many students who wish to speak up as possible. You will also earn participation credits by submitting your analysis/discussions of the Kristen case, the Zara case, and *The Goal*.

### **Notice on Academic Integrity**

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing mark on the paper. There may be additional penalties, including failing the course, in accordance to the university policies, as listed in the SCampus.

# **Turnitin Technologies**

USC is committed to the general principles of academic honesty that include and incorporate the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. By taking this course, students are expected to understand and abide by these principles. All submitted work for this course may be subject to an originality review as performed by Turnitin technologies (http://www.turnitin.com) to find textual similarities with other Internet content or previously submitted to use student-submitted work for any other purpose than (a) performing an originality review of the work, and (b) including that work in the database against which it checks other student-submitted work.

### For Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to your instructor as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

# **Course Disclaimer**

This syllabus is an invitation to students to engage in an exciting and interactive study of operations management. The intention of the BUAD 311 team of instructors is to provide you with information, offer practice with skill sets, and enhance your capacity to use fundamental concepts to build your repertoire of operating strategies and make sound decisions. The learning environment will be collaborative and supportive; we will learn from one another both in and out of the classroom. To that end, modifications to this syllabus might be warranted as determined by the instructors as we assess the learning needs of this particular class of students.

# **COURSE OUTLINE**

# Module 1: Process Analysis and Capacity Management

Session 1 – 8/22/11 (Monday) / 8/23/11 (Tuesday): Introduction to Operations Management and Process Analysis *Question:* What is Operations Management? Why Operations Management?

*Learning Outcomes:* The purpose of this session is to introduce Operations Management (OM) to you. You and your classmates will discover that OM is everywhere and that a study of OM prepares you to make sound business decisions by assessing trade-offs and identifying improvements.

- Define and recognize Operations Management in real-world situations
- Construct and read processes using flow chart diagrams
- Understand the potential trade-offs in make-to-stock and make-to-order processes
- A preview of risk pooling

Text Reading: Chapter 1: pp. 1-7, Chapter 2: pp. 23-29

# Session 2 - 8/24/11 (Wednesday) / 8/25/11 (Thursday): Measures: Capacity, Time, and More

Question: How do we quantify the performance of a process?

*Learning Outcomes:* The flow of customers or products into and out of a system determines process efficiency and ultimately the bottom line.

- Define capacity and utilization rate
- Throughput time and throughput rate
- Understand that a bottleneck governs the process capacity

Text Reading: Chapter 2: pp. 29-41

**ARES Reading:** "Charging Ahead to Push Electric Cars" Los Angeles Times, December 27, 2008 "Latest Starbucks Buzzword: 'Lean' Japanese Techniques" Wall Street Journal, August 1, 2009 **Teaching Note:** Process Analysis

# Session 3 - 8/29/11 (Monday) / 8/30/11 (Tuesday): The Kristen's Cookie Company (Textbook Appendix B), More on Capacity Management

*Question:* What is the makeup of a small cookie business? How do we determine capacity requirements? *Learning Outcomes:* Through this case, you will gain a better understanding of the business profitability through business process practices, evaluate key performance measures, and realize your decision's effects on the bottom line. After the case, we will also examine factors that determine capacity planning of a business.

- Learn fundamental capacity requirement calculations
- Understand the impact of flexibility on capacity requirement
- Understand the impact of inventory on capacity requirement

# Case preparation questions can be found at the end of the case.

Text Reading: Appendix B

You will earn participation points by submitting your analyses by 6:00pm the previous day.

# Session 4 - 8/31/11 (Wednesday) / 9/1/11 (Thursday): Little's Law

*Question:* What is Little's Law? How can we use the formula to better understand the performance of a business process?

*Learning Outcomes:* There is an important relationship among key performance indicators of a process. You will learn this powerful formula to help you better understand how to improve the performance of a business process.

- Evaluate process performance using Little's Law
- Understand how versatile the formula is

We will also re-acquaint ourselves with probability and statistical concepts before we move on to Module 2.

• Refresh your understanding of concepts such as random variable and distribution

- Re-acquaint yourself with the language of probability and statistics (expectation, variance, variability)
- Review and practice basic formulas and common distribution functions that are widely used

Text Reading: Chapter 1: pp. 7-10

Due HW # 1: Process Analysis and Capacity Management

# Module 2: Managing Uncertainty

Session 5 - 9/06/11 (Tuesday) / 9/07/11 (Wednesday): Waiting Lines: Understanding Rules and Principles *Question:* How is waiting experienced as a psychological phenomenon? What rules and non-formulaic principles can support us in understanding and managing wait lines or queues to optimize performance and revenues? *Learning Outcomes:* Understanding *waiting* as a phenomenon and *queuing* as theory and process enables us to create schedules, monitor inventory, analyze service, and determine a cost-effective balance for optimal performance and revenues. In this class, you will build a core understanding of three important factors pertaining to the performance of waiting lines.

- Recognize the psychology of waiting-lines
- Understand variability and its impact on waiting performance
- Review utilization rate and its effect on waiting performance
- Identify the risk pooling effect in waiting line systems

**Text Reading:** Chapter 3: pp. 47-60

ARES Reading: "The Psychology of Waiting-lines" David H. Maister

"A Long Line for a Shorter Wait at the Supermarket" New York Times, June 23, 2007 **Teaching Note:** Variability and Queues

Session 6 - 9/8/11 (Thursday) / 9/12/11 (Monday): Waiting Lines: Waiting Line Classifications and Formulae *Question:* What are important factors that can help us quantify waiting time? How can mathematical calculations support our decision-making for optimal performance and revenues?

*Learning Outcomes:* What does waiting look like when we model real-life as variables for use in formulae and mathematical calculations to determine expected waiting time?

- Identify classifications for different kinds of waiting systems
- Present formulae for various waiting systems to quantify waiting time
- Practice solving for average waiting time using formulae
- Re-examine principles of waiting lines using formulas

# Text Reading: Chapter 3: pp. 60-80

ARES Reading: "Cracking the Code at Disneyland" Wall Street Journal, December 23, 2004

"Triaging the Wait" Los Angeles Times, December 21, 2009

Quiz # 1: Process Analysis, Capacity Management, and Little's Law

# Session 7 - 9/13/11 (Tuesday) / 9/14/11 (Wednesday): Simulation

*Question:* How can computers help us manage uncertainty?

*Learning Outcomes:* Today's discussion will involve us in an assignment where we determine a range or confidence interval (rather than one expected value) to guide our decision-making under uncertainty.

- Simulate waiting lines
- Simulate portfolio and project development management
- Appreciate the value of distributions and become acquainted with the concept of confidence interval

Text Reading: Chapter 4: pp. 86-102

**ARES Reading:** "American Airlines Changes its Boarding Process" Los Angeles Times, June 27, 2011 "Airlines Go Back to Boarding School to Move Fliers onto Planes Faster" Wall Street Journal, July 21, 2011 **Due** HW # 2: Waiting Lines

# Session 8 - 9/15/11 (Thursday) / 9/19/11 (Monday): "The Goal"

Question: What is "the Goal" of a firm? What is the process of continuous improvement?

*Learning Outcomes:* The book "The Goal" provides a nice description of process flows, accounting measures, bottleneck management, and continuous improvement.

- Key financial measures identified in the book
- How financial measures are related to inventories and throughput rate

- Re-visit bottlenecks
- Philosophy/approach to continuous improvement

# Text Readings: The Goal

You will earn participation points by submitting your analyses by 6:00pm previous day.

Session 9 - 9/20/11 (Tuesday) / 9/21/11 (Wednesday): West Coast University Student Health Services: Primary Care Clinic (Textbook Appendix C)

*Question:* With a given number of physicians, how can we best serve patients most efficiently and with minimal wait time? How do we leverage the risk pooling effect?

*Learning Outcomes:* Today's discussion involves us in problem-centered learning. Putting theory and skills to practice, we will engage with a case to deepen our understanding of how to manage capacity in a real-world scenario. You will need to sort through extensive case information, gain experience as a member of team to solve a capacity management problem, and practice with risk pooling, variability, and utilization rate concepts and formulae.

Case preparation questions:

- 1. In Joan Carvin's mind, what are the main problems that the Health services are facing? Do you agree with Joan? Explain your answer in detail.
- 2. What are the potential solutions to the problems? First, explain Joan Carvin's solutions, and the advantages and disadvantages of the proposed solution. Then, explain your suggested solution in case you have one.
- 3. How would you measure the success of a solution? What are the measures you would use? Explain your answer.
- 4. Assuming the solution suggested by Dr. Carvin, how would you construct the teams? How many Physicians and how many NP should be in each team? In your analysis, you may assume that all physician and NP are preferred, more or less, by the same number of students. Also, in your analysis, you may make any reasonable assumptions. You must state these assumptions very clearly.

If you have a solution that is different than Dr. Carvin's solution, then explain the advantages of your solution. Support your position with facts and analysis.

# Text Reading: Appendix C

**Due** West Coast University Student Health Services team case analyses (6:00pm previous day) **Due** Littlefield Game code

Session 10 - 9/22/11 (Thursday) / 9/26/11 (Monday): Exam #1 Review

## Session 11 - 9/27/11 (Tuesday) / 9/28/11 (Wednesday): Exam #1 Due Littlefield Registration

# Observation period for the first Littlefield Game starts at 7:00 pm, 9/29/11

# Module 3: Optimization and Linear Programming

### Session 12 - 9/29/11 (Thursday): 10/03/11 (Monday): Introduction to Linear Programming

*Question:* How do we find the optimal solution? What is a linear program? How can we use Excel to solve a linear program?

*Learning Outcomes:* Optimization gives business a critical edge. In this class, you will learn that optimization is a powerful tool that can be applied to various business problems not limited to operations management. You will be able to formulate a linear program (LP) and solve a small LP problem using Excel Solver.

- Recognize linear program as a special optimization tool
- Understand the components of a linear program
- Formulate linear programs and solve it using Excel Solver
- Make decisions utilizing optimization to allocate resources effectively

Text Reading: Chapter 5: pp. 113-122.

**ARES Reading:** "Did You Hear the One About the Salesman Who Traveled Better?" Wall Street Journal, April 23, 2004

Teaching Note: Linear Programming

# Session 13 - 10/04/11 (Tuesday) / 10/05/11 (Wednesday): Practical Linear Programs

*Question:* Can we use the LP techniques to solve real business problems? What are typical business problems where LP techniques can be applied? How can we interpret sensitivity analysis reports?

*Learning Outcomes:* You will practice more advanced linear program formulations in Excel. You will appreciate the value of Excel reports, which help you understand how the solutions change if conditions vary.

- Solve linear program using Excel Solver
- Interpret the Excel reports for business insights

# Module 4: Forecasting

# Session 14 - 10/06/11(Thursday) / 10/10/11(Monday): Introduction to Forecasting

*Question:* What makes a good forecast?

*Learning Outcomes:* Anticipating the future is no easy task. From astrologers to business managers, we try as best we can to use science and mathematics to demystify the unknown for optimal decision-making. Finance and marketing as well as production and service rely on forecasting to make both long-term and short-term management plans and decisions. You will learn the methods basic to forecasting, become skilled at calculating measurement error, and understand the trade-off between responsiveness and stability in parametric selection.

- Define basic concepts of forecasting
- Understand how to measure forecast error of a forecast method
- Apply the simple moving average model
- Apply the exponential smoothing method

# **Text Reading:** Chapter 6: pp. 135-140, 152-160

**ARES Reading:** "Former Mattel Employee's Battle Shows Whistle-Blowers Walking a Fine Line" Los Angeles Times, February 20, 2003

# First Littlefield Game Starts at 7:00 pm, 10/11/11

Session 15 - 10/11/11(Tuesday) / 10/12/11(Wednesday): Forecast with Trend and Seasonality *Question:* How do we forecast in environments with trend and seasonal characteristics?

*Learning Outcomes:* You will practice the exponential smoothing method and learn how to make adjustments in forecasting for trend and seasonal effects by adding more parameters.

- Identify the risk pooling effect in forecasting
- Practice the double exponential smoothing method for trend forecast
- Text Reading: Chapter 6: pp. 157-158

Session 16 - 10/13/11(Thursday) / 10/17/11(Monday): Blue Ribbon Foods (Case will be posted in Blackboard) *Question:* How can we build a successful model to solve real-world resource allocation problems? What is the "optimal" product mix?

*Learning Outcomes:* In this case, you will transform a business challenge into a mathematical model with your choice of decision variables and objective function. Not only will you build a model, but you will also interpret the solution into business conclusions.

*Case preparation questions can be found at the end of the case.* 

Due Blue Ribbon Foods team case analyses (6:00pm previous day)

# First Littlefield Game Ends at 7:00 pm, 10/18/11

# Module 5: Revenue Management

Session 17 - 10/18/11(Tuesday) / 10/19/11(Wednesday): Introduction to Revenue Management and Decision Trees *Question:* How can we optimize our decision in an uncertain world? What is a Decision Tree? How can it be used as a tool to manage and increase revenue?

*Learning Outcomes:* A Decision Tree is a schematic model used to manage uncertainty by clearly identifying choices and alternative. You will learn how to construct a decision tree --- i.e. its nodes and branches and solve the optimal decision by studying a capacity investment problem.

• Learn to draw a decision tree and distinguish two types of the nodes

- Practice solving decision trees
- Appreciate the value of delaying decisions to collect information

**ARES Reading:** "Saints' Risky Decisions were Both Calculated and Crucial" New York Times, February 9, 2010 **Quiz #2:** Linear Programming and Forecasting

# Session 18 – 10/20/11(Thursday) / 10/24/11(Monday): Revenue Management Tools

*Question:* How many classes of seats should an airline offer? What price should an airline charge to increase revenue? And how many seats should an airline allocate for each class?

*Learning Outcomes:* You have purchased airline tickets and experienced variability in ticket prices. You have probably also been offered a greater sum of money and additional awards to buy-back your ticket at the gate for overbooked flights. In this lesson, we will learn tools to control capacity and manage revenues more effectively.

- Appreciate the history of revenue management as "invented" by airline carriers after deregulation
- Become acquainted with the revenue management tools: marketing segmentation, overbooking, and capacity control.
- Identify the elements and trade-offs of basic revenue management
- Utilize a decision tree to more effectively solve these types of problems

**ARES Reading:** "You Paid What for That Flight?" Wall Street Journal, August 26, 2010 "Airlines, Masters of Overbooking, Are Bumping Less" New York Times, April 6, 2010 **Teaching Note:** Yield Management

## Session 19 – 10/25/11(Tuesday) / 10/26/11(Wednesday): Revenue Management Tools (Cont'd)

*Question:* How many seats should an airline sell for each class and how to allocate capacity in a network? *Learning Outcomes:* In this session, we will learn tools to control capacity and manage revenues more effectively; we will especially gain a network view for revenue management practice.

- Become acquainted with revenue management tools: capacity control and network revenue management model.
- Utilize linear program in revenue management problems

**Due** HW #3: Revenue Management

Session 20 - 10/27/11 (Thursday) / 10/31/11 (Monday): Exam # 2 Review

Session 21 – 11/1/11(Tuesday) / 11/02/11(Wednesday): Exam #2

# Observation period for the second Littlefield Game starts at 7:00 pm, 11/03/11

# Module 6: Inventory Management and Supply Chain Coordination

Session 22 - 11/03/11 (Thursday) / 11/07/11 (Monday): Economies of Scale

Question: Why carry inventories? What are "economies of scale"? How can we minimize costs?

*Learning Outcomes:* Inventory is essential for business activities though it can be costly. You will examine the trade-off between economies of scale and inventory cost and learn how to find the right amount of inventory using the economic order quantity (EOQ) formula.

- Discuss the phenomena of economies of scale
- Identify elements and trade-offs in basic inventory control problems
- Practice using the EOQ formula to minimize cost

Text Readings: Chapter 7: 185-193, 197-200, 208-210

# Session 23 - 11/08/11 (Tuesday) / 11/09/11 (Wednesday): Demand Uncertainty

*Question:* Why carry inventories? How to guarantee customer satisfaction with minimum inventory? *Learning Outcomes:* Inventory is a necessary evil especially when you face demand uncertainty. You will learn a reasoning method called marginal analysis. You will examine the trade-off between more and less inventories and solve the problem optimally via a decision tree.

- Identify elements and trade-offs in basic inventory control problems
- Practice marginal analysis and solve using a decision tree

Examine the risk pooling effect in inventory systems
Text Readings: Chapter 7: pp. 193-196
ARES Reading: "The Web as a Store Windows" New York Times, August 24, 2010
Teaching Note: Inventory Management
Due First Littlefield Game Report
Due Root Beer Game Code and Registration

Session 24 - 11/10/11 (Thursday) / 11/14/11 (Monday): Putting it together: Economies of Scale & Demand Uncertainty

*Question:* What does a real-life inventory policy look like? When and how many should we reorder? *Learning Outcomes:* Various real-life inventory systems are presented. The optimal policy is built on the same trade-offs you learned in the previous sessions. Today's class will help you play the simulation game.

- Learn different kinds of inventory systems
- Understand the concept of lead-time and safety stock
- Identify the trade-offs in a real-life inventory system

Text Readings: Chapter 7: pp. 196-197, 201-208

# Second Littlefield Game Starts at 7:00 pm, 11/15/11

Session 25 - 11/15/11 (Tuesday) / 11/16/11(Wednesday): Supply Chain Dynamics and Root Beer Game *Question:* What is the "bull-whip" effect? How do our decisions influence others' decisions? *Learning Outcomes:* The success of a company relies on its upstream supplier and downstream distribution partners. Incentives and information are two crucial factors in decision making. You will play the beer game to demonstrate the information distortion in a supply chain.

- Experience the bull-whip effect via the beer game
- Learn how to combat the bull-whip effect.

# Text Readings: Chapter 8: pp. 231-238

**ARES Readings:** "Clarity is Missing Link in Supply Chain" Wall Street Journal, May 18, 2009 **Quiz #3:** EOQ and newsvendor

# Session 26 - 11/17/11 (Thursday) / 11/21/11 (Monday): Supply Chain Coordination

Question: What is double marginalization? How can we coordinate a supply chain?

*Learning Outcomes:* Double marginalization is another incentive issue in a supply chain. This occurs because each player in a supply chain tries to maximize their own expected profit, not the supply chain's profit. After

demonstrating the consequence of double marginalization, you will learn how to align different players' incentives.

- Understand the concepts of supply chain and supply chain coordination
- Learn the consequences of misaligned incentives
- Identify buy-back and revenue sharing contracts that coordinate the supply chain

ARES Reading: "Can the iPad or the Kindle Save Book Publishers?" National Public Radio, April 27, 2010

# Second Littlefield Game Ends at 7:00pm, 11/22/11.

# Session 26.5 - 11/22/11 (Tuesday): Review Session

Session 27 - 11/28/11 (Monday) / 11/29/11 (Tuesday): Zara Case Study (Case will be posted on Blackboard) *Question:* Have you been to a Zara store? How does Zara manage its inventory and supply chain? *Learning Outcomes:* The fashion business is demanding on inventory management because leftovers get significant markdowns. You will study Zara's supply chain structure and its inventory policy and examine how its operation strategy aligns with its business strategy.

Case preparation questions:

- 1. What makes Zara different from other specialty apparel retailers?
- 2. Where are competitive threats to Zara likely to come from?
- 3. What should Zara's approach be in determining its sourcing mix? What factual assumptions are you making when you reach your conclusions?

4. How sustainable is Zara's competitive advantage, in your opinion, relative to the kinds of advantages typically pursued by other retailers?

ARES Reading: "Zara Grows as Retail Rivals Struggle" Wall Street Journal, March 26, 2009 "Zara Wakes Up to the Web" Wall Street Journal, August 26, 2010 You will earn participation points by submitting your analyses by 6:00pm previous day. Due HW #4: Inventory Management

Session 29 - 11/30/11 (Wednesday) / 12/01/11 (Thursday): Final Review

Due Second Littlefield Game Report

Final is scheduled for Monday, December 12, 4:30-6:30 pm. No early finals are allowed by University policy.