

IN4704, GESTION DE OPERACIONES II – OTONO 2011

CALENDARIO DEL CURSO

Semana		Martes	Miercoles	Jueves	Tareas
1	7-Mar	Intro		Caso: National Cranberry	
2	14-Mar	Catedra: Colas	AUX – Software Arena	Aplicacion modelos de colas	
3	21-Mar	Caso: Manzana Insurance	AUX – Preparacion T1	Catedra: Gestion de Calidad	
4	28-Mar	Caso: Ritz Carlton		Preparacion Littlefield	Jue: entrega Tarea 1
5	4-Apr	No hay clase	Discussion Littlefield	Catedra: Newsvendor	Mie: entrega Littlefield
6	11-Apr	Caso: LL Bean.		Caso: Timbuk2	
7	18-Apr	AUX: Ejercicios preparacion C1		Control 1	
8	25-Apr	Caso: Sport Obermeyer		Catedra: Simulacion Montecarlo	
9	2-May	Revenue Management	AUX – Software simulacion	Revenue Management	
10	9-May	Progr. Estocast. Benders	AUX – Preparacion T2	Progr. Estocast. SAA	Jue: CL RM
11	23-May	Optimizacion Robusta		Optimizacion Robusta	Jue: entrega Tarea 2
12	30-May	Logistica	Control 2 (tentativo)	Logistica Transporte	Jue: CL Stoch Prog.
13	6-Jun	VRP	AUX – Preparacion T3	VRP	
14	13-Jun	VRP		Scheduling	Jue: CL VRP, Tarea 3
15	20-Jun	Scheduling		Revision	

AUX: clase auxiliar

CL: Control de lectura

T: tarea

GESTION DE OPERACIONES II

Semestre Otoño 2011

Profesores Marcelo Olivares y Fernando Ordonez

Motivacion y Objetivos del Curso

La gestión de operaciones se centra en el diseño y gestión de procesos dentro de una empresa u organización con el fin de transformar los insumos en productos o servicios finales. Por consiguiente, las operaciones cruzan transversalmente las distintas áreas funcionales de una empresa (marketing, finanzas, contabilidad, etc.) y por lo tanto es esencial alinear las operaciones con la estrategia general de la organización. Para esto, revisaremos los distintos conceptos, modelos y métodos vistos en el primer curso de Gestion Operaciones enfatizando su aplicación práctica en problemas reales y como estos se relacionan con otras áreas de la empresa.

Los principales objetivos del curso son:

- Obtener una visión integrada de la Gestión de Operaciones y como se alinea con la estrategia de negocios.
- Aplicar los conceptos y modelos de gestión de operaciones a problemas prácticos de negocios.
- Usar métodos y modelos cuantitativos avanzados para resolver problemas complejos y de gran escala.

Material de estudio:

Clases de catedra: Se enfocan en revisar los conceptos y modelos visto en cursos previos, enfatizando los trade-offs que estos capturan. También veremos nuevos métodos y modelos útiles para resolver problemas complejos.

Estudios de Caso: Ejemplos concretos de problemas de negocios donde se aplican los conceptos y modelos de Gestion de Operaciones. El foco está orientado a entender la integración de la función de operaciones con las distintas áreas funcionales del negocio. Los casos de estudio requieren preparación previa a la clase y participación durante la clase.

Tareas computacionales: Se enfocan en el uso de modelos cuantitativos para resolver problemas de negocio.

Clases auxiliares: se enfocan principalmente a dar soporte para las tareas y controles.

Evaluación

La evaluación del curso se separa en tres partes. Para aprobar el curso se requiere aprobar cada una de las tres.

Actividades grupales (40%): los alumnos deberán formar grupos de tres personas durante la primera semana del curso. Los grupos trabajan en:

- 3 tareas computacionales
- Actividad experiencial (Juego Littlefield)

Casos y Lecturas (30%): incluye la preparación de los estudio de casos, participación en la discusión del caso y controles de lectura.

- Estudios de casos: se verán 6 casos durante horarios de clases regulares. En todos los casos se indicaran preguntas de preparación que cada alumno deberá trabajar previo a clase para estar preparado a aportar a la discusión. Se evaluara participación en clase para todos los casos. Además, para algunos casos habrá que entregar ejercicios cortos al comienzo de la clase que se enfocan a una preparación más detallada de cada caso
- Lecturas: se harán 3 controles de lectura relacionados al material visto en clase.

Controles escritos (30%): 2 controles y un examen que cubren materia de catedra, problemas y principales conclusiones de los casos.

TEMARIO DETALLADO DEL CURSO

INTRODUCCION

Clase 1: Introduccion. Ligando Eficiencia Operacional con la Estrategia de Negocios

Clase 2: Caso – National Cranberry Cooperative

Lectura: Caso National Cranberry (HBS)

To prepare for the discussion do the following:

1. Draw a process flow diagram showing the major process steps, inventories and flows beginning with Receiving and finishing with the Separators. Indicate the capacity at each of the process steps in *barrels per hour*. You should assume:
 - a. 16,000 barrels per day is the average of deliveries over the 20 days from 9/20-10/9.
 - b. Each truck carries 75 barrels on average
 - c. Trucks arrive uniformly over a 12-hour period
 - d. 70% of trucks carry exclusively wet berries and 30% of them carry exclusively dry berries.
 - e. During high-volume period, the destone/dechaff/dry operations starts at 7AM (rather than 11 AM as shown in Figure E).
2. Which operation (or operations) is the bottleneck?
3. How late does the plant need to be open (i.e., when does the plant shut down) during this peak season?
4. How bad is the truck delay at the loading dock during this peak season?
5. What are the basic options for improving the operation? Which options would you recommend and why? In justifying your recommendation, be sure to include a simple quantitative analysis (i.e., include an intelligent back of the envelope calculation).

In class, be prepared to discuss and defend your recommendations.

GESTION DE OPERACIONES EN SERVICIOS

Clase 3: Catedra - Modelos de Colas

Clase 4: Aplicación de modelos de colas.

Lectura: Por definir.

Clase 5: Caso – Manzana Insurance

Lectura: Caso Manzana Insurance

Preparacion del caso:

1. What operational problems is Manzana facing? How might they be connected to the deteriorating profits experienced over the past year?
2. What are some possible alternatives for improving Manzana's performance? How might these specifically help to eliminate the causes of the problems facing Manzana?
- 3.

You are Bill Pippin. On the memo on the first page of the case, Tom Jacobs identifies various problems facing the Fruitvale branch. He then asks for “a memo with concrete suggestions.” Write that memo, hand it in at the beginning of the class and be prepared to discuss it in class.

Clase 6: Catedra - Gestion de Calidad

Clase 7: Caso- Ritz Carlton

Lectura: Caso Ritz Carlton (CBS)

Preparacion del caso:

The Excel file ritz.xls posted on Angel contains a listing of a subset of all defects reported in the DQPR for the Ritz-Carlton Buckhead over the period from January 1997 to November 1997. The subset contains all defects for twelve categories of defects that directly impact the customer and are identified as causes for customer dissatisfaction.

Group exercise: analyze this data file and answer the following questions in a one page summary due at the start of class:

1. Does the data in the file ritz.xls indicate any significant quality problems?

2. If you were to select a category of defect to address from the DQPR data, which category would you address? Why?
3. For your chosen defect category, consider the process that generates the defects. Assess whether or not the process is in control using a p-chart.
4. Using the data and your common-sense knowledge of hotel operations, generate hypotheses about the possible root causes of the defect category that you selected.

Explanation of fields in the ritz.xls file:

<u>Field Name</u>	<u>Explanation</u>
ID	Unique ID number assigned to each defect in report
Date1	The date the defect was recorded in the DQPR
Date2	The date the defect occurred
Time	The time the defect occurred
Count	The number of defects of this type
Keyword	The category of defect type that the defect is assigned to
Memo	Detailed description of the defect
Source	Source of information of this defect to the DQPR
Room	The room number of guest
Department	Department where suspected cause of the defect

The "Summary Counts" workbook contains total counts of defects by keyword for each date (Date 2). This workbook also has the occupancy data (estimated number of guests in the hotel on each day).

Clase 8: Introduccion al Juego Littlefield

Lectura: Instrucciones Littlefield

Cada grupo debe traer al menos un laptop. Durante la clase explicaremos el funcionamiento del juego y los grupos deberán planificar una estrategia. El juego comienza 15 minutos antes del término de la clase.

(*) Entrega Tarea 1

Clase 9: Discusion del Juego Littlefield Labs

(*) Entrega Tarea Littlefield.

GESTION DE LA CADENA DE SUMINISTRO

Clase 10: El modelo Newsvendor y sus aplicaciones

Lectura: Capitulo Cachon-Terwiesch

Due: Encuesta Online – Predicciones iPhone. Ver link en U-cursos para responder la encuesta.

Clase 11: Caso – LL Bean.

Lectura: Caso LL Bean (HBS)

Preparacion del caso:

Read the case, and think about the following questions:

1. How significant (quantitatively) of a problem is the mismatch between orders and demand for LL Bean?
2. What information should Scott Sklar have available to help him arrive at a demand forecast for a particular style of men's shirt that is a new catalog item?
3. Assuming LL Bean manages to derive the correct forecast, what do you think about their ordering process? (You may wish to begin with Mark Fasold's concerns at the end of the case. Also, think about Rol Fessenden's concern about estimating contribution margin and liquidation costs.)
4. Do you have any ideas to help LL Bean improve their forecasting process?
5. *Group Exercise:* In the course webpage, you will find an Excel file that contains actual demand and forecast data for a collection of items offered in the previous season. Suppose those are the data L.L. Bean will use to plan their next season. Consider a shirt that will be sold at \$30 dollars and costs LL Bean \$15 dollars. The liquidation price for this item will be \$10. The sales forecast for this shirt is 12,000. What order quantity would LL Bean choose for this item in order to maximize expected profit?

Submit a one page summary of the group exercise and be prepared to discuss it in class.

Clase 12: Caso -- Timbuk2.

Lectura: Caso Timbuk2

Preparacion del caso:

Read the case and think about the following questions for class discussion.

1. What channels does Timbuk2 sell through and which one is the most profitable?
2. How should Timbuk2 go about deciding which options to offer customers through mass-customization? In other words, what general principles or analysis could be used to deepen their understanding of the appropriate choices? You may want to consider several of the options mentioned (an added handle, different color logos, different size panels, etc.)
3. What are the costs and benefits of moving production to China? If so, what challenges are they likely to face and what changes will they need to make? In particular, think about utilization of San Francisco factory before and after outsourcing as well as about inventory needs.

Clase 13: Caso – Sport Obermeyer

Lectura: Caso Sport Obermeyer

1. Using the sample data given in Exhibit 10, make a recommendation for how many units of each style Wally Obermeyer should order during the initial phase of production (a spreadsheet with Exhibit 10 is posted in Angel). Assume there are no limits in the total size of the order (i.e. there is unlimited capacity), and ignore the minimum order quantity constraint in your analysis. Also, assume that there would be no future production for these parkas (i.e., only one production decision is taken to satisfy the demand).
2. As indicated in the case, there are two production runs in Asia. The first production takes place six months before the Las Vegas show (production early), and the second one right after the show (production late). The production capacity after the show is limited and therefore some production must be done early. Discuss qualitatively the factors that Wally Obermeyer should consider in deciding which parkas to produce early and which to produce late (no calculations are needed).

Clase 14: Catedra - Simulacion Montecarlo

DETALLE DEL RESTO DE LAS CLASES SE ENTREGARA MAS ADELANTE