Course	**OPRE 3310.005/006: Operations Management**
Professor	Prof. Anyan Qi
Term	Fall 2017
Meetings	Section 005: Mo/We 1:00pm-2:15pm, JSOM 2.107 Section 006: Mo/We 2:30pm-3:45pm, JSOM 2.107

PROFESSOR'S CONTACT INFORMATION

Office Phone	(972)883-5952
Office Location	3.214
Email Address	Use the email tool on eLearning to contact me.
Office Hours	Tuesday 2pm-4pm, or by appointment
TA	Tanya Israni
TA Email	tri170030@utdallas.edu
TA Office Hours	• Tuesday 4:00pm-6:30pm • Assignment due date 4:00pm-6:30pm • Location: JSOM 2.604

GENERAL COURSE INFORMATION

Pre-Requisites	• MATH 1326 or MATH 2414 or MATH 2419 • MATH 2333 or MATH 2418 or CS 2305 or OPRE 3333. • STAT 3360 or OPRE 3360.
Other Restrictions	N/A
Course Description	This course teaches concepts useful in efficiently managing the transformation of materials, labor, and capital into products or services. Topics covered include: the role of operations management in overall competitive strategy, key performance measures, and tools for improving operations performance. The level of discussion varies from long-term strategic planning to daily control of business processes.
Learning Outcomes	Students will understand the role operations management plays in business processes. Upon completion of the course, students will also be able to: • Quantitatively analyze and interpret operations information • Solve typical operations management problems • Document and report operations performance • Recognize and address ethical issues that arise when managing operations
Required Texts & Materials	There are **two required coursepacks**: one contains readings from Ross School of Business, University of Michigan, and the other contains readings and cases from Harvard Business School. Please purchase both coursepacks directly through the publisher, WDI Publishing and Harvard Business Publishing (HBSP) respectively as the UTD bookstore no longer provides service to print

out and bind cases.

- Coursepack (WDI Publishing).
  Link: https://wdi-publishing.com/coursepack/purchase/?cpack=DEKN5
- Coursepack (Harvard Business School Cases).
  Link: http://cb.hbsp.harvard.edu/cbmp/access/65982441

Other Texts, Readings & Materials

Other materials and lecture notes will be posted on eLearning.

If students would like to read a textbook, the following two are recommended:

- Jacobs, F. R., and Chase, R. B. "Operations and Supply Chain Management," 14th ed.
- Cachon, G., and Terwiesch, C. "Matching Supply with Demand: An Introduction to Operations Management," 3rd ed.

The required coursepacks, lecture notes, and other materials posted on eLearning should be sufficient for the students to learn the material. The optional textbooks are not required.

COURSE POLICIES

Grading (credit) Criteria

The total score (100 points) will be made up of five parts.

- **Case reports (30%).**

  The students are expected to form a case group (no more than 5 members) and complete 5 case reports. Each group must consist of team members from the same section and must stay together for all 5 submissions. At the end of the semester a peer-review form will be used to evaluate team members' performance; each member's grade may be adjusted up or down based on feedback from other team members. The highest four out of the five reports will be used to calculate the final grades.

  In case reports #2-5, there are (optional) bonus questions, which are due one week after the in-class discussion. More details will be provided in class.

- **Assessment quiz (close-book and close-note) (10%).**

  The assessment quiz focuses on the topic of inventory management.

  OPRE 3310 is considered a core course and as such certain measurement instruments are implemented to ensure a uniformity of learning across all sections. These measurements are provided to university accreditation associations during their periodic audits. The grading of the Assurance quizzes is controlled through a standard grading scheme called a Rubric.

  The Rubric measures three important elements of learning: 1) understanding, 2) writing, and 3) correct answers. Therefore students are encouraged to express their understanding of the problems in a clear and concise written format such as writing any formulas completely and correctly.

- **Test I (20%).**

  This test covers the first half of the course. The test is open-book and open-note. Students are permitted to use Excel in the test. The test location is the Testing Center in the McDermott Library (MC 1.401). Any

communications among students during tests are not allowed.

- **Test II (30%).**

  This test covers the second half of the course. The test is open-book and open-note. Students are permitted to use Excel in the test. The test location is the Testing Center in the McDermott Library (MC 1.401). Any communications among students during tests are not allowed.

- **Class participation (10%).**

  Class attendance is highly encouraged. If you must miss a class because of an emergency you will have to contact the professor in advance for permission and provide proof. You are also expected to actively participate in class.

Letter grade

Your final letter grade will be determined relative to your classmates.

Make-Up Exams

NO make-up exam will be offered except in case of medical emergency (proof required).

Extra Credit

Extra credit will be offered if students correctly answer the bonus questions (see the detailed course schedule).

Late Work

NO late assignments will be accepted.

Class Attendance

- You are expected to actively participate in the class. See "Strategies for Success" below on "Participation" for more details.
- You are expected to read the required materials prior to the corresponding class lecture (see the Course Outline for detail).
- You are responsible for all material discussed and all course schedule changes announced during class.

Classroom Citizenship

- Class begins on time. Please maintain class decorum and be respectful toward fellow students in the class. If you have a doubt or misunderstanding regarding course work feel free to discuss it with me.
- Using your phone during class is not permitted and is rude. Keep your phone on silent at all times and away from your desk. This includes no texting. Offenders will be asked to turn off their phones. If this is a recurring problem students will be asked to give their phones to the instructor and will be returned at the end of the class session.
- Laptop computer policy: Using a laptop (for the purpose of taking notes) is permitted. All other features and their usage (such as e-mail, internet, games, and instant messenger) are **strictly prohibited** and regarded as class disruptions.
- These rules will be enforced.

Accessibility Accommoda-tions

It is the policy and practice of the University of Texas at Dallas to make reasonable accommodations for students with properly documented disabilities. However, written notification from the Office of Student AccessAbility (OSA) is required. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with me and allow one week advance notice. Students who have questions about receiving accommodations, as well as those who have or think they may

have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact the Office of Student Access Ability for a confidential discussion. OSA is located in the Student Services Building, suite 3.200. They can be reached by phone at (972) 883-2098, or by email at studentaccess@utdallas.edu.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.

STRATEGIES FOR SUCCESS

1. **Class preparation:**

   The main topics, reading assignments, and suggested problems appear below. In each class you will be expected to:

   a) Complete required readings and skim lecture notes (prior to class) if you have time.
   b) Take additional notes on the printed lecture notes.
   c) Work on all the cases and actively participate in in-class discussions.
   d) Solve the Practice Problem Sets provided for each module (see Course Topics on p. 7) on eLearning.
   e) Read the appropriate portions of the textbook (before and after class) if you have time.
   f) Bring a **nameplate** to every class.

   I understand that you have limited time. However, I strongly urge you to devote adequate time to the course since this is not material you can cram over a day or two. If you are pressed for time for specific classes, prioritize your class preparation in the order given above.

2. **Class participation:**

   Please bring your **nameplate** to every class.

   The instructor will come to class fully prepared each day, and students are expected to do the same. "Prepared" for students means that you have carefully read the assigned materials, have seriously attempted to complete exercises or answer assigned questions, and are ready and willing to actively engage in the classroom learning experience. A number of students will be asked to initiate the case discussion. The implicit assumption is that we all have something to contribute to the collective learning experience each day, and we all want to benefit from it. Coming prepared will maximize the benefits for everyone. Class participation will be evaluated based on each student's comments and contributions to case and lecture discussions. The relatively high percentage placed on class participation is based on the above assumption that learning will be enhanced if well-prepared individuals contribute. The instructor will systematically record data on class participation. "Excellent" participation is that which enhances group learning: it could be a question, an observation, a shared experience, or an answer to a question. Students are also encouraged to submit relevant news clippings to the instructor for discussion in class. Less than excellent participation would include *disruptive entrances/departures, causing distraction to yourselves, colleagues, and instructors by inappropriate use of your laptop or cellphone, and/or taking class time to ask for information that would be redundant for students properly prepared for class.*

3. **Practice problem sets**

   A list of suggested questions and problems will be posted on eLearning periodically. Students are strongly advised to work on these questions and problems. This gives students an opportunity to practice their problem-solving skills on small, well-defined problems, and will be useful in tackling cases and test questions.

4. **Workload expectation:**

   The key to competence is **PRACTICE**. You will be given the opportunity to work on many practice problems in this course.

Note that university guidelines recommend that you study 2-3 hours per week for every credit hour in which you are enrolled. University expectations suggest you spend **6-9 hours** outside of class every week on homework and studying for this course.

A rule of thumb for time requirements is that I expect students will spend approximately 3 hours preparing for and reviewing each class, with additional time spent solving the practice problems and preparing for exams. Trimming this time input will diminish the value of the educational experience for everyone. Please recognize the importance of advance preparation, and begin now to level-load your course time input.

5. **How to get help:**

   In addition to my office hours, a TA will be available for additional office hours for those students who need help. This course moves rapidly. **DO NOT FALL BEHIND**! It is recommended that you see your instructor **immediately for any difficulties.**

6. **Assignment Preparation:**

   For each case, you should do the following:

   a) Read the case. Then ask yourself, "What are the issues here?" That is, what is the controversy to be resolved and/or what are the decisions or evaluation to be made?
   b) Answer the questions developed for the case. Go back through the case and develop analysis needed to respond to the questions. Write your case report using the report templates on eLearning.
   c) After answering the questions, ask yourself, "Have I resolved the issues in the case?" In many cases, the answers are not the end in themselves, but merely the means to help give you insights into resolving the issues. You may then come to some meaningful conclusion or recommendation.
   d) Make notes that would be helpful to you if you are called upon in class to give a brief synopsis of the case, discuss the case situations, and answer the case questions.

7. **Tests:**

   Test 1 and 2 will consist of both quantitative and qualitative questions related to the readings, lectures, and discussions of the course. A practice test with solutions will be available on eLearning. The combination of reading, self-study exercises, classwork, practice, and graded individual and group assignments will fully prepare students to take the test. Both tests will be open-book and open-notes, subject to the academic integrity policy. Students are responsible for making sure they appear for the exams on time. No latecomers will be admitted. Students who fail to write any of the exams, without prior permission from their instructor, will not be given any make-up exams.

COURSE TOPICS

1. **Process Types and Process Flow Analysis.**

   The first module of the course introduces the spectrum of manufacturing and service processes. We introduce concepts of process flows and bottlenecks, and discuss the opportunities for competitive advantage in each type of production system. Using Little's law we relate throughput, flow time and in-process inventories, and relate these parameters to measures of business process effectiveness. A service exercise (Kristen's Cookie Company) and an agricultural processing case (National Cranberry) will frame our discussion.

2. **Managing Process Flows: Planning Capacity and Coping with Variability.**

   In the second module, we visit business contexts in which variability complicates the planning and management of process flows. A service-sector case from air transport (Logan Airport) shows the effects of variability and the application of queuing models.

3. **Planning Projects.**

   In this module, we introduce a tool for project management. The tool is the Critical Path Method, applied in the Toys City case.

4. **World-Class Operations Systems.**

   We next turn our attention to world-class manufacturing systems design. We start from the Toyota Production System, and discuss related topics including Quality Management and Capability and Lean Operations (House Building Game).

5. **World-Class Supply Chain Operations.**

   The final academic module of the course treats the challenge of excellence that transcends technical, national and organizational boundaries. We study inventory management and discuss newsvendor model. The newsvendor model is background for an exercise in non-centralized decision making within a distribution chain (Beer Game). An example of world-class excellence in supply chain management precedes our capstone case of a pharmaceutical supply chain (Betapharm). The last session is wrap-up and review. Then we test (final exam)!

TENTATIVE COURSE OUTLINE

OPRE 3310.005/006: Fall 2017 Course Outline

No.	Date	Topic	Required Readings	Optional Readings	Submissions
1	Aug 21	Introduction and Overview		1(t)	
2	Aug 23	Process Analysis		1, 2(t)	
3	Aug 28	Process Analysis Application I **Case: Kristen's Cookie Co.**	1(cp)	1, 2(t)	2-page report
4	Aug 30	Taxonomy of Process Types Inventory Build-up and Little's Law		1, 2(t)	
	Sep 4	**No Classes on Labor Day**			
5	Sep 6	Variability and Buffers	3, 4(cp)	1(t)	
6	Sep 11	Process Analysis Application II **Case: National Cranberry**	2(cp)		5-page report*
7	Sep 13	Process Analysis Application II **Case: National Cranberry** (cont'd)	2(cp)		
8	Sep 18	Queuing Analysis	see p.11	3(t)	
9	Sep 20	Understanding and Managing Congestion **Case: Delays at Logan Airport**	5(cp)		3-page report*
10-11	Sep 23	Midterm Review JSOM 1.212. 1PM-4PM, Sat, Sep 23. Online video will be provided on eLearning.			
12	Sep 25	Introduction to Project Management		4(t)	
13-14	Sep 27-28	**Test 1: Two and half hours (details to be announced in class.)**			
15	Oct 4	Project Management Application: **Case: Toys City**	6(cp)		3-page report*
16	Oct 9	Quality and Capability		5, 6(t)	
17	Oct 11	TQM and Lean Operations **House Building Game**			
18	Oct 16	Lean Operations, Inventory Management I Toyota Production System	7, 8(cp),	7(t)	
19	Oct 18	Inventory Management II.1: EOQ, EPQ, and Safety Stock	8(cp)	7(t)	
	Oct 23-25	**No Classes (make up for the midterm review on Sat Sep 23)**			
20	Oct 30	Inventory Management II.2: EOQ, EPQ, and Safety Stock	8(cp)	7(t)	
21	Nov 1	**Assessment Quiz: One hour during regular class time.**			
22	Nov 6	Inventory Management III: Balancing Underage and Overage Costs	8(cp)	7(t)	
23		Inventory Management IV (optional online session): Periodic review system	8(cp)	7(t)	
24	Nov 8	Supply Chain Coordination **The Beer Game**			
25	Nov 13	Bullwhip Effect, Supply Chain Coordination, and E-Business	see p.15		
26	Nov 15	Strategic Global Sourcing **Case: Betapharm Corp.**	9(cp)		3-page report*
	Nov 20-22	**No Classes (Fall Break and Thanksgiving)**			
27	Nov 27	Course Wrap-up and Final Review (Part I)			
28	Nov 29	Final review (Part II)			
29-30	Dec 1-4	**Test 2: Two and half hours (details to be announced in class.)**			

*Bonus questions are due one week after the class.

OPRE 3310.005/006 Detailed Daily Schedules

The following pages list a lecture-by-lecture outline of the entire course. The learning objective, readings, and suggested activities for each lecture are listed. I will attempt to stick to this schedule as much as possible, although I reserve the right to modify the lecture contents depending on the evolution of the course. Sufficient notice will be given for any changes.

SESSION #1 Aug. 21

INTRODUCTION AND OVERVIEW

Learning Objectives:

- Understand course structure and expectations
- Understand what Operations Management (OM) is about and the central role of operational decisions in firms' competitiveness

Preparation:

- Purchase coursepacks and (optional) textbook

After Class:

- Form groups and post the name of all members in your group (no more than 5 students) on eLearning by midnight of Sunday, August 27.
- Read chapter 1(t) sections 1 and 2, chapter 2(t) sections 1, 2, and 3.

SESSION #2 Aug. 23

PROCESS ANALYSIS

Learning Objectives:

- Introduce the terminology and tools used to describe, analyze, and evaluate processes

Preparation:

- Read chapter 1(t) sections 1 and 2, chapter 2(t) sections 1, 2, and 3.

After Class:

- Form groups and post the name of all members in your group (no more than 5 students) on eLearning by midnight of Sunday, August 27, if you have not done so.
- Read **Kristen's Cookie Company** case, coursepack item 1(cp). Submit a 2-page case report for grading by midnight of August 27.

SESSION #3 Aug. 28

PROCESS ANALYSIS APPLICATION I: KRISTEN'S COOKIE CO.

Learning Objectives:

- Continue discussions of process analysis techniques
- Describe levers for improving throughput rate and flow time
- Apply process analysis as a tool to Kristen's Cookie Co. case

Preparation:

- Write a **2-page report** analyzing **Kristen's Cookie Company** (A) case, and **submit for grading** by midnight of August 27. Be prepared to discuss in class.

SESSION #4 Aug. 30

TAXONOMY OF PROCESS TYPES, INVENTORY BUILD-UP, LITTLE'S LAW

Learning Objectives:

- Understand generic process types and their implications
- Understand how inventory builds up and learn to construct inventory build-up diagrams
- Understand Little's Law

Preparation:

- Read chapter 1(t) sections 3, 4, and 6, chapter 2(t).

After Class:

- Start preparing **National Cranberry Cooperative** case, coursepack item 2(cp). A required case report is due by midnight of September 10.

NO CLASSES (Labor Day) **Sep. 5**

- Register your seat for Test 1: https://www.registerblast.com/utdallas/Exam/List
- Note that the course number is "OPRE 3310" (NOT "OPRE 3360")

SESSION #5 Sep. 6

VARIABILITY AND BUFFERS

Learning Objectives:

- Understand the effects of variability and utilization on congestions and delays
- Introduce accurate response: matching supply and demand
- Introduce the "OM Triangle": relation between capacity, inventory and information

Preparation:

- Read chapter 1(t) section 5, and coursepack items 3(cp) and 4(cp): "Variability, Buffers, and Inventory" and "Making Supply Meet Demand in an Uncertain World". Be prepared to discuss in class. Assignment will be handed out in class.

SESSION #6-7 Sep. 11 & 13

PROCESS ANALYSIS APPLICATION II: NATIONAL CRANBERRY

Learning Objectives:

- Apply process analysis in a manufacturing setting
- Use inventory buildup diagram to perform bottleneck analysis
- Discuss capacity investment

Preparation:

- Write a **5-page report** analyzing **National Cranberry Cooperative** case, and **submit for grading** by midnight of September 10. Be prepared to discuss in class.
- You **may submit** the bonus questions of your analysis within a week after the class on Sep 13.

SESSION #8 Sep. 18

CAPACITY PLANNING IN SERVICE: QUEUEING ANALYSIS

Learning Objectives:

- Understand why queues build up in service
- Understand the structure and performance characteristics of basic queueing systems
- Learn how to make capacity decisions using queueing analysis

Preparation:

- Read chapter 3(t) and "There's More to a Line Than Its Wait" posted on the electronic course reserve.

After Class:

- Read **Delays at Logan Airport** case, coursepack item 5(cp). A case report is due by midnight of September 19.

SESSION #9 Sep. 20

UNDERSTANDING AND MANAGING CONGESTION: DELAYS AT LOGAN AIRPORT

Learning Objectives:

- Realize the power of simple queueing models in realistically estimating wait times and evaluating options to manage congestion
- Understand peak hour pricing as a method of demand management

Preparation:

- Read and analyze **Delays at Logan Airport** case. Submit a 3-page case report for grading by midnight of September 19. Be prepared to discuss in class.
- You **may submit** the bonus questions of your analysis within a week after the class.

SESSION #10-11 Sep. 23 (Saturday)/Online

MIDTERM REVIEW

Prepare for Test 1

Location: JSOM 1.212. Time: 1:00 PM-4:00 PM, Saturday, September 23.

SESSION #12 Sep. 25

INTRODUCTION TO PROJECT MANAGEMENT

Learning Objectives:

- Introduction to Project Management
- Understand Project Management concepts: Critical Path methods, time and cost management of projects

Preparation:

- Read textbook item 4(t): "Project Management".

After Class:

- Read **Toys City** case, coursepack item 6(cp). Submit a 3-page case report for grading by midnight October 3.

SESSION #13-14

TEST 1 **Two and half hours** **Sep. 27-28**

Test I: The test will be held at Testing Center at the McDermott Library (MC 1.401). Note that the exam location is NOT the regular classroom. The exact test time will be announced in class.

Test I covers the first half of the course. The test is open-book and open-note, but any communications among students are strictly forbidden.

No classes on Oct 2 to make up for the test time.

SESSION #15 Oct. 4

PROJECT MANAGEMENT APPLICATION: TOYS CITY

Learning Objectives:

- Apply project management techniques to a simple case involving a consulting company

Preparation:

- Read and analyze **Toys City** case. Submit a 3-page case report for grading by midnight October 3. Be prepared to discuss in class.

SESSION #16 Oct. 9

QUALITY AND CAPABILITY

Learning Objectives:

- Master fundamentals of quality management: dimensions, costs, and "Six Sigma" tools
- Understand basic concepts of Statistical Process Control
- Understand capability, and distinguish between process being "in control" and being "capable"
- Combine statistical and managerial insights in a case context

Preparation:

- Read textbook item 5(t) and 6(t).

SESSION #17 Oct. 11

TQM AND LEAN OPERATIONS: HOUSE BUILDING GAME

Learning Objectives:

- Understand the basics of lean operations and the role of quality management
- Demonstrate the basic concepts of lean and quality through a hands-on exercise

Preparation:

- It is very important to start this game on time, so please be a few minutes early.

SESSION #18 Oct. 16

LEAN OPERATIONS AND INVENTORY MANAGEMENT I

Learning Objectives:

- Understand how the Toyota Production System works in practice, especially the coordination of material flows with information flows within and across organizational lines
- Understand the basic concepts of Kaizen, Jidoka, Heijunka, Kanban systems, etc.
- Become familiar with basic inventory concepts: Reasons for holding inventory, inventory holding cost, ordering cost, and tradeoff between the two costs.

Preparation:

- Read coursepack item 7(cp) "A Brief Note on the Toyota Production System". Be prepared to discuss in class the following questions:
  1. What are the fundamental elements of the Toyota Production System?
  2. Does Toyota respond just-in-time to customer orders?
  3. What are the pros and cons of the Andon system? How much might stopping the line cost Toyota?
  4. What are the pros and cons of operating mixed model assembly (i.e., having a mix of products on the line at one time)?
  5. How can the Toyota Production System be applied in non-manufacturing settings?
  6. How do the 4 TPS rules-in-use support Toyota's commitment to quality?
- Read "Managing Inventories" Notes, coursepack item 8(cp). Also refer to textbook item 7(t), "Inventory Control". Familiarize yourself with the basic ideas of inventory management.

After Class:

- Register your seat for Test 2: https://www.registerblast.com/utdallas/Exam/List
- Note that the course number is "OPRE 3310" (NOT "OPRE 3360")

SESSION #19-20 Oct. 18, Oct. 30

INVENTORY MANAGEMENT II: EOQ, EPQ, AND SAFETY STOCK

Learning Objectives:

- Understand the 5 critical questions in inventory management
- Understand the answers to 4 critical questions (except the "best service level" question)

Preparation:

- Read "Managing Inventories" Notes, coursepack item 8(cp). Read textbook item 7(t) (skip price break model) as a supplement.

After Class:

- Start preparing **Assessment Quiz**, which is scheduled on Nov. 1.

NO CLASSES (Makeup for Sep 23) **Oct. 23 – Oct. 25**

SESSION #21

ASSESSMENT QUIZ **One hour during regular class time. November 1**

Assessment Quiz: The test will be held at the <u>regular classroom</u>. Assessment Quiz covers inventory management, in particular the EOQ and EPQ models. The test is close-book and close-note, and a formula sheet will be provided.

SESSION #22 Nov. 6

INVENTORY MANAGEMENT III: BALANCING UNDERAGE AND OVERAGE COSTS

Learning Objectives:

- Recognize the power of Newsvendor logic
- Practice the use of Underage and Overage Costs in contexts of inventory, capacity, and revenue management

Preparation:

- Read "Managing Inventories" Notes, coursepack item 8(cp). Read textbook 7(t): "A Single-Period Inventory Model" as a supplement.

SESSION #23 (optional <u>online</u> session)

INVENTORY MANAGEMENT IV: PERIODIC REVIEW SYSTEM

Learning Objectives:

- Understand the 5 critical questions in inventory management on periodic review system
- Understand the answers to 4 critical questions (except the "best service level" question)

Preparation:

- Read "Managing Inventories" Notes, coursepack item 8(cp). Read textbook item 7(t) as a supplement.

SESSION #24 Nov. 8

SUPPLY CHAIN COORDINATION: THE BEER GAME

Learning Objectives:

- Understand the sources of variability that bedevil Supply Chain Management

Preparation:

- Read carefully the "Beer Game" handout and instructions for playing the game. You will need to understand all the details to be able to complete the tasks during class time.

After Class:

- Read **Betapharm Corp.** case, coursepack item 10(cp). Be prepared to submit a 3-page report by midnight November 14.

SESSION #25 Nov. 13

BULLWHIP EFFECT, SUPPLY CHAIN COORDINATION, AND E-BUSINESS

Learning Objectives:

- Understand the Bullwhip Effect in supply chains
- Translate strategic E-Business and IT choices into operational decisions
- Understand "virtual integration" supply chain model

Preparation:

- Read "Pace-Setting Zara Seeks More Speed" posted on the electronic course reserve. Be prepared to discuss in class.

After Class:

- Read **Betapharm Corp.** case, coursepack item 10(cp). Be prepared to submit a 3-page report by midnight November 14.

SESSION #26 Nov. 15

STRATEGIC GLOBAL SOURCING: PROCUREMENT AT BETAPHARM CORP.

Learning Objectives:

- Understand the differences between and attendant challenges of indirect and direct materials sourcing
- Understand the role of online auctions in competitive sourcing
- Introduce the concept of "total cost of contract ownership" and how to evaluate it using OM toolset

Preparation:

- Read and analyze **Betapharm Corp.** case. Submit a **3-page group case report** for grading by midnight November 14. Be prepared to discuss in class.

NO CLASSES (Makeup for Sep 24, Fall Break and Thanksgiving) Nov. 20 – Nov. 22

SESSION #27-28 Nov. 27 – Nov. 29

COURSE WRAP-UP AND FINAL REVIEWS

Preparation:

- Come prepared to ask questions on any concepts that are not clear.

SESSION #29-30

TEST 2 Two and half hours December 1-4

Test 2: The test will be held at <u>Testing Center at the McDermott Library (MC 1.401)</u>. Note that the exam location is NOT the regular classroom. The exact test time will be announced in class.

Test 2 covers the second half of the course. The test is open-book and open-note, but any communications among students are strictly forbidden.

No classes on Dec 6 to make up for the test time.

Coursepack (cp) Table of Contents

Coursepack Materials	Comment
1(cp). Case: Kristen's Cookie Company (A)	Session #3 Case
2(cp). Case: National Cranberry Cooperative	Session #6-7 Case
3(cp). Reading: Variability, Buffers and Inventory	Session #5 Reading
4(cp). Reading: Making Supply Meet Demand in an Uncertain World	Session #5 Reading
5(cp). Case: Delays at Logan Airport	Session #9 Case
6(cp). Case: Toys City[1]	Session #15 Case
7(cp). Reading: A Brief Note on the Toyota Production System	Session #18 Reading
8(cp). Reading: Managing Inventories	Session #18-21, 26 Reading
9(cp). Case: Procurement at Betapharm Corp. (A) (B) (C)	Session #25 Case

Textbook (t) Table of Contents

Chapters Titles	Source[2]
1(t). The Process View of the Organization	CT Ch2
2(t). Understanding the Supply Process: Evaluating Process Capacity	CT Ch3
3(t). Variability and Its Impact on Process Performance: Waiting Time Problems	CT Ch8
4(t). Project Management	JC Ch4
5(t). Six-Sigma Quality	JC Ch12
6(t). Statistical Quality Control	JC Ch13
7(t). Inventory Control	JC Ch20

[1] This case will be posted on eLearning. Thanks to authorization from Prof. Mike Moses.

[2] "JC" refers to Jacobs, F. R., and Chase, R. B. "Operations and Supply Chain Management," 14th ed.
"CT" refers to Cachon, G., and Terwiesch, C. "Matching Supply with Demand: An Introduction to Operations Management," 3rd ed.

ACADEMIC INTEGRITY

The faculty and administration of the School of Management expect from our students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work. We want to establish a reputation for the honorable behavior of our graduates, which extends throughout their careers. Both your individual reputation and the school's reputation matter to your success.

The Judicial Affairs website lists examples of academic dishonesty. Dishonesty includes, but is not limited to cheating, plagiarism, collusion, facilitating academic dishonesty, fabrication, failure to contribute to a collaborative project and sabotage. Some of the ways students may engage in academic dishonesty are:

- Coughing and/or using visual or auditory signals in a test;
- Concealing notes on hands, caps, shoes, in pockets or the back of beverage bottle labels;
- Writing in blue books prior to an examination;
- Writing information on blackboards, desks, or keeping notes on the floor;
- Obtaining copies of an exam in advance;
- Passing information from an earlier class to a later class;
- Leaving information in the bathroom;
- Exchanging exams so that neighbors have identical test forms;
- Having a substitute take a test and providing falsified identification for the substitute;
- Fabricating data for lab assignments;
- Changing a graded paper and requesting that it be regraded;
- Failing to turn in a test or assignment and later suggesting the faculty member lost the item;
- Stealing another student's graded test and affixing one's own name on it;
- Recording two answers, one on the test form, one on the answer sheet;
- Marking an answer sheet to enable another to see the answer;
- Encircling two adjacent answers and claiming to have had the correct answer;
- Stealing an exam for someone in another section or for placement in a test file;
- Using an electronic device to store test information, or to send or receive answers for a test;
- Destroying or removing library materials to gain an academic advantage;
- Consulting assignment solutions posted on websites of previous course offerings;
- Transferring a computer file from one person's account to another;
- Transmitting posted answers for an exam to a student in a testing area via electronic device;
- Downloading text from the Internet or other sources without proper attribution;
- Citing to false references or findings in research or other academic exercises;
- Unauthorized collaborating with another person in preparing academic exercises.
- Submitting a substantial portion of the same academic work more than once without written authorization from the instructor.

http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-Basicexamples.html

PLAGIARISM

Plagiarism on written assignments, especially from the web, from portions of papers for other classes, and from any other source is unacceptable. On written assignments, this course will use the resources of turnitin.com, which searches the web for plagiarized content and is over 90% effective.

CONDUCT DURING COURSE EXAMS

During tests and quizzes, students in this section are not allowed to have with them any food and drinks. When possible, students should sit in alternating seats, face forward at all times, and remove any clothing which might conceal eye movements, or reflect images of another's work. Exam proctors will monitor any communication or signaling between students by talking, whispering, or making sounds, or by using your hands, feet, other body movements, the test paper itself, your writing implement.

ACADEMIC DISHONESTY

Students in this course suspected of academic dishonesty are subject to disciplinary proceedings, and if found responsible, the following minimum sanctions will be applied:

- **Homework – Zero for the Assignment**
- **Quizzes – Zero for the Quiz**
- **Presentations – Zero for the Assignment**
- **Group Assignments – Zero for the Assignment for all group members**
- **Exams – Zero for the Exam and a one letter grade reduction of the final course grade**

These sanctions will be administered only after a student has been found officially responsible for academic dishonesty, either through waiving their right for a disciplinary hearing, or being declared responsible after a hearing administered by Judicial Affairs and the Dean of Student's Office.

In the event that the student receives a failing grade for the course for academic dishonesty, the student is not allowed to withdraw as a way of preventing the grade from being entered on their record. Where a student receives an F in a course and chooses to take the course over to improve their grade, the original grade of F remains on their transcript, but does not count towards calculation of their GPA.

The School of Management also reserves the right to review a student's disciplinary record, on file with the Dean of Students, as one of the criteria for determining a student's eligibility for a scholarship.

JUDICIAL AFFAIRS PROCEDURES

Under authority delegated by the Dean of Students, a faculty member who has reason to suspect that a student has engaged in academic dishonesty may conduct a conference with the student in compliance with the following procedures:

1. the student will be informed that he/she is believed to have committed an act or acts of academic dishonesty in violation of University rules;
2. the student will be presented with any information in the knowledge or possession of the instructor which tends to support the allegation(s) of academic dishonesty;

3. the student will be given an opportunity to present information on his/her behalf;
4. after meeting with the student, the faculty member may choose not to refer the allegation if he/she determines that the allegations are not supported by the evidence; or
5. after meeting with the student, the faculty member may refer the allegations to the dean of students along with a referral form and all supporting documentation of the alleged violation. Under separate cover, the faculty member should forward the appropriate grade to be assessed if a student is found to be responsible for academic dishonesty;
6. the faculty member may consult with the dean of students in determining the recommended grade;
7. the faculty member must not impose any independent sanctions upon the student in lieu of a referral to Judicial Affairs;
8. the faculty member may not impose a sanction of suspension or expulsion, but may make this recommendation in the referral documentation

If the faculty member chooses not to meet with the student and instead forwards the appropriate documentation directly to the dean of students, they should attempt to inform the student of the allegation and notify the student that the information has been forwarded to the Office of Dean of Students for investigation.

The student, pending a hearing, remains responsible for all academic exercises and syllabus requirements. The student may remain in class if the student's presence in the class does not interfere with the professor's ability to teach the class or the ability of other class members to learn. (See Section 49.07, page V-49-4 for information regarding the removal of a student from class).

Upon receipt of the referral form, class syllabus, and the supporting material/documentation from the faculty member, the dean shall proceed under the guidelines in the Handbook of Operating Procedures, Chapter 49, Subchapter C. If the respondent disputes the facts upon which the allegations are based, a fair and impartial disciplinary committee comprised of UTD faculty and students, shall hold a hearing and determine the responsibility of the student. If they find the student in violation of the code of conduct, the dean will then affirm the minimum sanction as provided in the syllabus, and share this information with the student. The dean will review the student's prior disciplinary record and assess additional sanctions where appropriate to the circumstances. The dean will inform the student and the faculty member of their decision.

UT DALLAS SYLLABUS POLICIES AND PROCEDURES

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.