Instructor: Rayan Bagchi  
Office: CBA 3.434A; Office Hours: MW 3:30-4:30 PM and by appointment  
Phone: (512) 471-5295 (W), (512) 458-1831 (H); e-mail: Uttarayan.Bagchi@mccombs.utexas.edu  
Course Web Page: via Blackboard

**COURSE DESCRIPTION**
Operations Management (OM) involves the systematic planning, design, operation, control, and improvement of businesses processes. Managing operations is vital to every organization, for it is only through the effective and efficient performance of work to be done that an organization can be successful in the long run. This is certainly true today when we see that significant competitive advantages accrue to those firms that manage their operations well (as exemplified by Southwest, Exxon, Wal-Mart, and Toyota etc.).

The course is conceptually structured in three interweaving modules. In one, we introduce the basic vocabulary of OM. We carefully consider process analysis, process design, and process control in the context of both manufacturing and service operations. In another, we look at several critical OM issues: project management, supply chain management, and management of waiting lines. Finally, in another, we seek ways to improve the overall competitiveness of a firm by exploring some strategic aspects of OM like lean operations, focused operations, and time based competition.

**COURSE PREREQUISITES**
Credit or registration for BA 324 or 324H and credit or registration for STA 309 or 309H.

**COURSE LEARNING OBJECTIVES**
At the end of this course, you should have gained an improved understanding of:

- how every organization uses processes to transform inputs into goods and services
- the importance of careful design, operation, and improvement of business processes

and acquired the skills to

- analyze any manufacturing or service process to uncover improvement opportunities

**TEACHING/LEARNING METHODOLOGY**
This course is a mixture of lectures, case discussions and problem solving. In class, have a calculator ready to help with arithmetic. **The readings for the class consist of a readings packet (which has all the cases and assigned articles), denoted by RP in the detailed course outline starting on page 5, and three required books** (described below), **all available from the University Coop**:

*Matching Supply with Demand* (Third Edition, ISBN: 978-0-07-352520-4, McGraw-Hill, 2013) by Cachon and Terwiesch.  (This is as close to a textbook as we have in this course. We shall use this book largely as a reference. Please read the assigned sections of this text, denoted by C&T in the detailed course outline starting on page 5, somewhat lightly at first. Go back for a re-read as you deem useful after we discuss the topic in class. *This book is a keeper – hold on to it.*)

Critical Chain (1st Edition, ISBN: 9780884271536, The North River Press) by E. Goldratt. (This is project management according to Goldratt of The Goal. It is a quick read. Please read it by Oct. 13.)

A packet of overheads is available from the UT Copy Center (GSB 3.136). You must bring the appropriate overheads to class starting with Session 2. This packet also has the homework.

CLASS PREPARATION In preparing for each class session, you must complete the mandatory readings before class. Suggested questions to help you prepare for case discussions are provided in the syllabus. And you must bring the case/exercise listed for that session (see page 11 for a quick overview) to class for ready consultation. Doing these two things constitutes your credentials as a class participant. Neglect one and you are but a mere spectator in class. And learning Operations is not a spectator sport.

Please let me know if there is anything I can do to make this class better for you.

PERFORMANCE EVALUATION

The final grade in this class will be based on your demonstrated performance as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1 (Wednesday, October 9, 7:00-9:30 PM, UTC 3.110)</td>
<td>20%</td>
</tr>
<tr>
<td>Exam 2 (Wednesday, November 13, 7:00-9:30 PM, UTC 3.110)</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam (Thursday, December 12, 9:00-12:00 noon – to be confirmed)</td>
<td>25%</td>
</tr>
<tr>
<td>Individual Homework (available on Blackboard)</td>
<td>10%</td>
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<tr>
<td>Group Homework (available on Blackboard)</td>
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<tr>
<td>Class Contribution</td>
<td>10%</td>
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<td>Total</td>
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Exams All three exams are closed-book, closed-notes, closed-laptop, etc. However, you may bring a self-prepared 3”x5” two-sided notes card to the exams. You may put anything you like on your notes card, but at least include whatever you may consider to be formulas.

Homework: Individual and Group (Available on Blackboard) The purpose of homework assignment is to reinforce learning and provide feedback. Do not defeat this purpose by consulting homework solutions that are the work of others. Please turn in your homework, properly stapled if two or more pages, at the beginning of class. Homework solutions will be posted on Blackboard. Please study them carefully. Late submission of homework is not acceptable.

For individual homework assignments, you are encouraged to work with other students in the class. But, the solution that you turn in must be your own work. Please, no Xerox copy of another student’s solution. Each individual homework assignment will be graded on a scale of 0-2. A solution showing evidence of effort at completeness will earn full points. Of the eight individual homework assignment grades, only the top five will count toward your course grade.

For group homework assignments, only one submission per group is required. Please form your own group (4-5 members) immediately. Each group homework assignment will be graded on a scale of 0-2.5. Credit on group homework is proportional to the quality of effort at completeness. The work that you turn in must be the work of your group. Please do not get help from others. Of the eight group homework assignment grades, only the top six will count toward your course grade.

Class Contribution This is a measure of how actively you are engaged in class, and what you contribute to the learning of others. Class attendance is an essential component of class contribution.
Practice Problems  These problems and their solutions, both available on Blackboard, are additional opportunities to test your mastery of the course material. Use them well.

McCombs Classroom Professionalism Policy
- **Students arrive on time.** On time arrival shows respect for both fellow students and faculty and it enhances learning by reducing avoidable distractions.
- **Students display their name cards.** This permits fellow students and faculty to learn names, enhancing opportunities for community building and evaluation of in-class contributions.
- **Students minimize unscheduled personal breaks.** The learning environment improves when disruptions are limited.
- **Students are prepared for each class.** Unprepared students cannot contribute to the overall learning process. This affects not only the individual, but their peers who count on them, as well.
- **Students do not speak unless they are speaking to the entire class.** Do not engage in private conversations, however short or innocuous, while the class is in progress. They are disruptive and discourteous to the speaker. Raise your hand if you have a question or comment.
- **Laptops are closed and put away and phones and wireless devices are turned off.**

Academic Dishonesty
The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the BBA Program’s Statement on Scholastic Dishonesty at [http://www.mccombs.utexas.edu/BBA/Code-of-Ethics.aspx](http://www.mccombs.utexas.edu/BBA/Code-of-Ethics.aspx). By teaching this course, I have agreed to observe all of the faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all of the student responsibilities described in that document. If the application of that Policy Statement to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification. Policy on Scholastic Dishonesty: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Judicial Services website at [http://deanofstudents.utexas.edu/sjs/](http://deanofstudents.utexas.edu/sjs/) or the General Information Catalog to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

A fundamental principle for any educational institution, academic integrity is highly valued and seriously regarded at The University of Texas at Austin. More specifically, you and other students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work undertaken at the University. This is a very basic expectation that is further reinforced by the University's Honor Code. At a minimum, you should complete any assignments, exams, and other scholastic endeavors with the utmost honesty, which requires you to:

- acknowledge the contributions of other sources to your scholastic efforts;
- complete your assignments independently unless expressly authorized to seek or obtain assistance in preparing them;
- follow instructions for assignments and exams, and observe the standards of your academic discipline; and
- avoid engaging in any form of academic dishonesty on behalf of yourself or another student.

For the official policies on academic integrity and scholastic dishonesty, please refer to Chapter 11 of the Institutional Rules on Student Services and Activities.
Honor Code
The core values of the University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community. (Link to University Honor Code: http://registrar.utexas.edu/catalogs/gi09-10/ch01/index.html).

Class Web Sites and student Privacy
Password-protected class sites will be available for all accredited courses taught at The University. Syllabi, handouts, assignments and other resources are types of information that may be available within these sites. Site activities could include exchanging e-mail, engaging in class discussions and chats, and exchanging files. In addition, class e-mail rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on FERPA related issues see http://registrar.utexas.edu/students/records/ferpa/.

Students with Disabilities
The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

Religious Holidays
By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Campus Safety
"Please note the following recommendations regarding emergency evacuation from the Office of Campus Safety and Security, 512-471-5767, http://www.utexas.edu/safety/:

.. Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside.

.. Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.

.. Students requiring assistance in evacuation should inform their instructor in writing during the first week of class.

.. In the event of an evacuation, follow the instruction of faculty or class instructors.

.. Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.

.. Behavior Concerns Advice Line (BCAL): 512-232-5050

.. Further information regarding emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency."

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SESSION 1 (W, Aug. 28)  INTRODUCTION TO OPERATIONS MANAGEMENT
Mandatory Readings: Course Syllabus
Optional Readings: 1. Chapter 1 of C&T (pages 1-9)
2. Chapter 2 of C&T (through section 2.3)
Case: IDEO Product Development

SESSION 2 (W, Sep. 4)  INTRODUCTORY PROCESS ANALYSIS
Mandatory Readings: 1. Kristen’s Cookie Company (A) (in RP)
Optional Readings: 1. Chapter 3 of C&T (through section 3.3)
Case: KRISTEN’S COOKIE COMPANY (A)
Case Preparation Questions: 1. We shall start with the “Key Questions to Answer before You Launch the Business” in class. You do not need to answer them before coming to class. But give them some thought.

No class on Monday, Sep. 9 (No Office Hours)

No class on Wednesday, Sep. 11 (No Office Hours)

SESSION 3 (M, Sep. 16)  INTRODUCTORY PROCESS ANALYSIS (cont…)
Mandatory Readings: 1. Kristen’s Cookie Company (A) (in RP)
Optional Readings: 1. Chapter 2 of C&T
2. Chapter 3 of C&T
Case: KRISTEN'S COOKIE COMPANY (A) (contin. ..)
Case Preparation Questions: 1. What happens if you are trying to do this by yourself without a roommate?

SESSION 4 (W, Sep. 18)  THE GOAL
Homework Due: IH-1
Mandatory Readings: 1. The Goal
Preparation Questions: 1. What is the marginal value of time at bottlenecks? At non-bottlenecks?
2. Where should Herbie be in the line of hikers?
3. How can one increase bottleneck capacity?
4. What happens if statistical fluctuations are ignored?

SESSION 5 (M, Sep. 23)  PROCESS DESIGN ISSUES: LAYOUT & UTILIZATION
Homework Due: IH-2, GH-1
Mandatory Readings: 1. "Texas Automobile License Renewal" (in RP)
Optional Readings: 2. Chapter 3 of C&T
Preparation: We shall work on the License Renewal exercise in class. Please read it carefully and bring it to class.
SESSION 6 (W, Sep. 25) INVENTORY BUILDUP
Homework Due: IH-3
Mandatory Readings: 1. “Capacity” (in RP) – Fishing fleet and cannery exercise
Optional Readings: 2. Chapter 2 of C&T (section 2.5)
Preparation: In class, we shall work on the Fishing fleet and cannery exercise. Please read the exercise carefully and consider the questions. Don’t forget to bring the exercise to class.

SESSION 7 (M, Sep. 30) SERVICE PROCESS ANALYSIS AND DESIGN
Homework Due: IH-4, GH-2
Mandatory Readings: 1. Benihana of Tokyo (in RP)
Case: BENIHANA OF TOKYO
Case Preparation Questions:
1. Compare the operating figures of a typical restaurant with those of Benihana based on the following factors: food and beverage costs, payroll, and rent. Why are costs lower at Benihana?

SESSION 8 (W, Oct. 2) SERVICE PROCESS ANALYSIS AND DESIGN (contin. ..)
Mandatory Readings: 1. Benihana of Tokyo (in RP)
Case: BENIHANA OF TOKYO (contin. ..)
Case Preparation Questions:
1. What design choices facilitate dining in less than an hour?
2. It would seem that by the time of Benihana Palace - Rocky's third Manhattan operation, Rocky had discovered that the size of the bar area should be balanced with the size of the dining area. Assuming 120 seats in the dining area, 48 seats in the bar, and a target process time of 60 minutes in the dining area, what target process time is implied for a customer in the bar?
3. What is the Benihana concept?

SESSION 9 (M, Oct. 7) PROCESS CONTROL & CAPABILITY
Homework Due: GH-3
Mandatory Readings: 1. Quality Wireless (A) (in RP)
2. Quality Wireless (B) (in RP)
Optional Readings: 1. Chapter 10 of C&T (through section 10.5)
Cases: QUALITY WIRELESS (A) & (B)
1. What fraction of the days in 2003-2004 failed to meet the targeted hold time of 110 seconds?
Given that the daily average hold time was normally distributed with a mean of 99.67 and a standard deviation of 24.24, what fraction of days where the call center failed to meet the targeted hold time of 110 seconds would you expect?
2. What fraction of the days in April 2005 failed to meet the targeted hold time of 110 seconds?
Given that the daily average hold time after process improvements was normally distributed with a mean of 79.50 and a standard deviation of 16.86, what fraction of days where the call center failed to meet the targeted hold time of 110 seconds would you expect?
3. Based on the performance in April 2005, do you think that the performance of the call center has improved?
4. What do you think of Jackson’s management approach?
SESSION 10 (W, Oct. 9)  PROCESS CONTROL AND CAPABILITY (contin. ..)
Review FOR EXAM 1
Homework Due: IH-5
Mandatory Readings: 1. Quality Wireless (A) (in RP)
2. Quality Wireless (B) (in RP)
Optional Readings: 1. Chapter 10 of C&T
Cases: QUALITY WIRELESS (A) & (B) (contin. ..)
Case Preparation Questions:
1. If we assume that call center performance during the month of September is continuing at the
improved level with a mean of 79.50 and a standard deviation of 16.86, what is the probability of
observing ten days that average 86.6 or more? What is the probability of observing ten days that
average 74.4 or less?
2. What would you do if you were in Jackson’s position?

Exam 1  Wednesday, Oct. 9, 7:00-9:30 PM, UTC 3.110

SESSION 11 (M, Oct. 14)  PROJECT MANAGEMENT
Homework Due: GH-4
Mandatory Readings: 1. Project Management, Chapter 3 (in RP) – pages 68-75
2. Critical Chain
Optional Readings: 2. Chapter 5 of C&T (through section 5.5)

SESSION 12 (W, Oct. 16)  PROJECT MANAGEMENT (contin. ..)
Homework Due: IH-6
Mandatory Readings: 1. Project Management, Chapter 3 (in RP) – pages 68-86
Optional Readings: 2. Chapter 5 of C&T (through section 5.6)

SESSION 13 (M, Oct. 21)  PROJECT MANAGEMENT (contin. ..)
Homework Due: IH-7
Mandatory Readings: 1. Project Management, Chapter 3 (in RP)
2. Critical Chain
Optional Readings: 3. Chapter 5 of C&T

SESSION 14 (W, Oct. 23)  MANAGEMENT OF WAITING LINES
Mandatory Readings: 1. Manzana Insurance – Fruitvale Branch (in RP)
2. Chapter 8 of C&T (through section 8.4)
Case:
MANZANA INSURANCE – FRUITVALE BRANCH
Case Preparation Questions:
1. What is the major competitive threat faced by Fruitvale?
2. It is commonly believed at Fruitvale that RUNs are the most profitable jobs? Is this belief justified?
3. What bottlenecks are revealed by the utilization analysis shown in the Table below? You have
to understand where the numbers in the Table come from.
MANZANA INSURANCE - Utilization Analysis (1991, 120 days, 450 minutes per day)

<table>
<thead>
<tr>
<th>Service Time Means: (From Exhibit 4)</th>
<th>RUNs</th>
<th>RAPs</th>
<th>RAINs</th>
<th>RERUNs</th>
<th>Average Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>68.5 mins.</td>
<td>50.0</td>
<td>43.5</td>
<td>28.0</td>
<td>40.97</td>
</tr>
<tr>
<td>UT</td>
<td>43.6</td>
<td>38.0</td>
<td>22.6</td>
<td>18.7</td>
<td>28.4</td>
</tr>
<tr>
<td>RT</td>
<td>75.5</td>
<td>64.7</td>
<td>65.5</td>
<td>75.5</td>
<td>70.39</td>
</tr>
<tr>
<td>PW</td>
<td>71.0</td>
<td>#N/A</td>
<td>54.0</td>
<td>50.1</td>
<td>54.78</td>
</tr>
</tbody>
</table>

Arrivals (Total): (From Exhibit 7)

| Arrivals (Total) | 350 | 1798 | 451 | 2081 | 4680 |

Arrivals Percentage: (From Exhibit 7)

| Territory 1 | 46.3 | 42.3 | 43.5 | 30.6 |
| Territory 2 | 28.6 | 28.5 | 27.7 | 40.3 |
| Territory 3 | 25.1 | 29.2 | 28.8 | 29.1 |
| (Total)     | 100  | 100  | 100  | 100  |

Utilizations (%): RUNs RAPs RAINs RERUNs Total

| DC (4) | 11.1² | 41.6 | 9.1 | 27.0 | 88.8 |
| UT1    | 13.1  | 53.5 | 8.2 | 22.1 | 96.9 |
| UT2    | 08.1  | 36.1 | 5.2 | 29.0 | 78.4 |
| UT3    | 07.1  | 36.9 | 5.4 | 21.0 | 70.4 |
| RT (8) | 06.1  | 26.9 | 6.8 | 36.4 | 76.2 |
| PW (5) | 09.2  | 07.1³ | 9.0 | 38.6 | 63.9 |

1 \([(43.6)(350)+(38.0)(1798)+(22.6)(451)+(18.7)(2081)]/4680 = 28.4\; ;
2 \([[(68.5)(350)]/[(4)(120)(450)]\] = 0.111; ³ 15% RAPs turned into RUNs

SESSION 15 (M, Oct. 28) MANAGEMENT OF WAITING LINES (contin. ..)

Homework Due: GH-5

Mandatory Readings: 1. Manzana Insurance – Fruitvale Branch (in RP)
                    2. Chapter 8 of C&T (through section 8.9)

Case: MANZANA INSURANCE – FRUITVALE BRANCH (contin. ..)

Case Preparation Questions:
1. Consider how TAT (turnaround time) is calculated (page 6 and Exhibit 3). Does this TAT reflect Fruitvale’s actual turnaround time? Why or why not?

SESSION 16 (W, Oct. 30) MANAGEMENT OF WAITING LINES (contin. ..)

Homework Due: IH-8

Mandatory Readings: 1. Manzana Insurance – Fruitvale Branch (in RP)
                    2. Chapter 8 of C&T

Case: MANZANA INSURANCE – FRUITVALE BRANCH (contin. ..)

Case Preparation Questions:
1. Make a few recommendations to improve Fruitvale’s performance.

SESSION 17 (M, Nov. 4) GLOBAL SUPPLY CHAIN: COORDINATION

Homework Due: GH-6
Mandatory Readings:  
1. Sport Obermeyer, Ltd. (in RP)  
2. Chapter 17 of C&T (through section 17.2)

Case:  
SPORT OBERMEYER, LTD.

Case Preparation Questions:
1. How would you characterize the role played by Sport Obermeyer in this global supply chain? The role played by Obersport? What are the critical capabilities of Sport Obermeyer? Of Obersport?
2. Wally Obermeyer has hired you as a consultant to advise him on production planning decisions for the Obermeyer product line. As you know, one of the major challenges Wally faces each year is deciding which items to order in November, and which ones to defer till the Las Vegas show. Under the capacity constraints limit Wally’s options. Wally wants your help with the sample problem (page 8) and refers you to Exhibit 10. Consider the Isis and Entice styles (Exhibit 10). Which one of these two styles is more risky for ordering in November, and why?

SESSION 18 (W, Nov. 6)  
GLOBAL SUPPLY CHAIN: NEWSVENDOR MODEL  
Mandatory Readings:  
1. Sport Obermeyer, Ltd. (in RP)  
2. Chapter 12 of C&T (through section 12.4)

Optional Readings:  
1. Chapter 13 of C&T

Case:  
SPORT OBERMEYER, LTD. (contin. ..)

Case Preparation Questions:
1. Wally Obermeyer has hired you as a consultant to advise him on production planning decisions for the Obermeyer product line. Wally wants your help with the sample problem (page 8) and refers you to Exhibit 10. How many Electra parkas should you order?
2. A number of factors constrain Obermeyer’s ability to produce so as to match supply demand. These include: (1) minimum production lot-size constraints; (2) limited reactive capacity in the sewing plants; (3) raw material lead times; and (4) the time at which retailer demand is made available to Obermeyer. How should Obermeyer address these factors so as to improve its ability to produce what the market wants? Specifically, how can Obermeyer increase its reactive capacity without necessarily hiring more people, working longer hours or buying new equipment?

SESSION 19 (M, Nov. 11)  
GLOBAL SUPPLY CHAIN: CONTRACTS  
Mandatory Readings:  
1. Sport Obermeyer, Ltd. (in RP)  
2. Chapter 17 of C&T

Case:  
SPORT OBERMEYER, LTD. (contin. ..)

Case Preparation Questions:
1. A number of factors constrain Obermeyer’s ability to produce so as to match supply demand. These include: (1) minimum production lot-size constraints; (2) limited reactive capacity in the sewing plants; (3) raw material lead times; and (4) the time at which retailer demand is made available to Obermeyer. How should Obermeyer address these factors so as to improve its ability to produce what the market wants? Specifically, how can Obermeyer increase its reactive capacity without necessarily hiring more people, working longer hours or buying new equipment?

SESSION 20 (W, Nov. 13)  
Review for EXAM 2

Exam 2  
Wednesday, Nov. 13, 7:00-9:30 PM, UTC 3.110
SESSION 21 (M, Nov. 18)  TOYOTA PRODUCTION SYSTEM
Homework Due: GH-7
Mandatory Readings: 1. Toyota Motor Manufacturing, USA, Inc. (in RP)
Optional Readings: 1. Chapter 11 of C&T (through section 11.4)
Case: TOYOTA MOTOR MANUFACTURING, USA, INC.
Case Preparation Questions:
1. The length of a station is 5.7 meters (Exhibit 6). Given that the cycle time is 57 seconds, what is the speed of the assembly line (in miles per hour)?
2. What is the capacity of the assembly line (cars per day; cars per week; and cars per year) assuming 100% line utilization? How many fewer cars are produced per shift if the run ratio is 95%? 85%?
3. This question is designed to estimate how much time KFS has to assemble a seat. Of the 353 stations, at least 314 (353 minus 39 in Groups 2 and 3 in Exhibit 6) are between the end of the paint line and the first seat installation station. What is the corresponding flow time? After subtracting the time a seat spends: traveling on TMM’s overhead seat conveyor line (about 250 meters), traveling in the truck, and waiting on KFS’s staging line, you get the time KFS has to assemble a seat. What is the time?
4. “Of all TPS components perhaps the one receiving most notoriety has been workers’ “ability” to stop the line.” What is the cost of stopping the line for one cycle? For five minutes? For half-an-hour?

SESSION 22 (W, Nov. 20)  TOYOTA PRODUCTION SYSTEM (contin. ..)
Mandatory Readings: 1. Toyota Motor Manufacturing, USA, Inc. (in RP)
2. Chapter 11 of C&T
Case: TOYOTA MOTOR MANUFACTURING, USA, INC. (contin. ..)
Case Preparation Questions:
1. What can Doug do to address the seat quality problem?

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No class on Monday, Nov. 25 (No Office Hours)

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No class on Wednesday, Nov. 27 (No Office Hours)

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SESSION 23 (M, Dec. 2)  OPERATIONAL EXCELLENCE
Mandatory Readings: 1. Southwest Airlines in Baltimore (in RP)
2. Chapter 6 of C&T (section 6.4)
Case: SOUTHWEST AIRLINES IN BALTIMORE
Case Preparation Questions:
1. How does Southwest Airlines (SWA) compete? What are its advantages and disadvantages?
2. The plane turnaround process requires coordination among twelve functional groups at SWA. Investigate the utilization of these functional groups.
3. Why is the operational performance at Baltimore eroding?

SESSION 24 (W, Dec. 4 )  INNOVATION FACTORY
Homework Due: GH-8
Mandatory Readings: 1. IDEO Product Development (in RP)
Case: IDEO Product Development
Case Preparation Questions:
1. How would you characterize IDEO’s ‘process’?
<table>
<thead>
<tr>
<th>Session</th>
<th>Date</th>
<th>Topic</th>
<th>Case/Exercise</th>
<th>Assignment Due</th>
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<tr>
<td>1</td>
<td>W</td>
<td>8/28 Introduction to Operations Management</td>
<td>IDEO</td>
<td></td>
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<tr>
<td>2</td>
<td>W</td>
<td>9/4 Introductory Process Analysis</td>
<td>Kristen's Cookie</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>9/9</td>
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<td></td>
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<tr>
<td>3</td>
<td>M</td>
<td>9/16 Introductory Process Analysis</td>
<td>Kristen's Cookie</td>
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<tr>
<td>4</td>
<td>W</td>
<td>9/18 The Goal</td>
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<td>IH-1</td>
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<td>5</td>
<td>M</td>
<td>9/23 Process Design Issues</td>
<td>License Renewal</td>
<td>IH-2, GH-1</td>
</tr>
<tr>
<td>6</td>
<td>W</td>
<td>9/25 Inventory Buildup</td>
<td>Fishing Fleet</td>
<td>IH-3</td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>9/30 Service Process Analysis and Design</td>
<td>Benihana</td>
<td>IH-4, GH-2</td>
</tr>
<tr>
<td>8</td>
<td>W</td>
<td>10/2 Service Process Analysis and Design</td>
<td>Benihana</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>M</td>
<td>10/7 Process Control &amp; Capability</td>
<td>Quality Wireless (A) &amp; (B)</td>
<td>GH-3</td>
</tr>
<tr>
<td>10</td>
<td>W</td>
<td>10/9 Process Control &amp; Capability Review for EXAM 1</td>
<td>Quality Wireless (A) &amp; (B)</td>
<td>IH-5</td>
</tr>
</tbody>
</table>

**EXAM 1**  Wednesday, October 9, 7:00-9:30 p.m., UTC 3.110  (EXAM 1 covers material from Sessions 1-8)

Office Hours: 12:30-1:30 p.m., 3:30-5:30 p.m.

<table>
<thead>
<tr>
<th>Session</th>
<th>Date</th>
<th>Topic</th>
<th>Case/Exercise</th>
<th>Assignment Due</th>
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<tbody>
<tr>
<td>11</td>
<td>M</td>
<td>10/14 Project management</td>
<td></td>
<td>GH-4</td>
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<tr>
<td>12</td>
<td>W</td>
<td>10/16 Project Management</td>
<td></td>
<td>IH-6</td>
</tr>
<tr>
<td>13</td>
<td>M</td>
<td>10/21 Project Management</td>
<td></td>
<td>IH-7</td>
</tr>
<tr>
<td>14</td>
<td>W</td>
<td>10/23 Management of Waiting Lines</td>
<td>Manzana</td>
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</tr>
<tr>
<td>15</td>
<td>M</td>
<td>10/28 Management of Waiting Lines</td>
<td>Manzana</td>
<td>GH-5</td>
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<tr>
<td>16</td>
<td>W</td>
<td>10/30 Management of Waiting Lines</td>
<td>Manzana</td>
<td>IH-8</td>
</tr>
<tr>
<td>17</td>
<td>M</td>
<td>11/4 Global Supply Chain</td>
<td>Sport Obermeyer</td>
<td>GH-6</td>
</tr>
<tr>
<td>18</td>
<td>W</td>
<td>11/6 Global Supply Chain</td>
<td>Sport Obermeyer</td>
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<tr>
<td>19</td>
<td>M</td>
<td>11/11 Global Supply Chain</td>
<td>Sport Obermeyer</td>
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<td>20</td>
<td>W</td>
<td>11/13 Review for EXAM 2</td>
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**EXAM 2**  Wednesday, November 13, 7:00-9:30 p.m., UTC 3.110  (EXAM 2 covers material from Sessions 9-18)

Office Hours: 12:30-1:30 p.m., 3:30-5:30 p.m.

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<th>Case/Exercise</th>
<th>Assignment Due</th>
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<tbody>
<tr>
<td>21</td>
<td>M</td>
<td>11/18 Toyota Production System</td>
<td>Toyota</td>
<td>GH-7</td>
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<tr>
<td>22</td>
<td>W</td>
<td>11/20 Toyota Production System</td>
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<tr>
<td>M</td>
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<tr>
<td>W</td>
<td>11/27</td>
<td>NO CLASS (No Office Hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>M</td>
<td>12/2 Operational Excellence</td>
<td>Southwest</td>
<td>GH-8</td>
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<tr>
<td>24</td>
<td>W</td>
<td>12/4 Innovation Factory</td>
<td>IDEO</td>
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</tbody>
</table>

**FINAL EXAM** (Thursday, December 12, 9:00-12:00 noon - To be confirmed when the final exam schedule comes out.)

**PLEASE Note: Evening Exams on Oct. 9 & Nov. 13; NO CLASS or office hours on Sep. 9, Sep. 11, Nov. 25, & Nov. 27).**

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