

BA 380N: OPERATIONS MANAGEMENT

Texas Executive MBA Fall 2012 #02065

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Course Web Page via Blackboard

COURSE OBJECTIVES

Operations Management (OM) involves the systematic planning, design, operation, control, and improvement of businesses processes. The course is conceptually structured as two modules. In the first, we focus on process analysis and process design. We address several critical OM issues: management of variability, operational fit and focus, process control and capability, lean operations, quality, and global supply chain management. In the second module, we seek ways in which operations can contribute to the overall competitiveness and renewal of a firm. We address strategic issues such as learning and improvement, operational hedging, new product development, and innovation.

By the end of this course, you should gain an improved understanding of

- the importance of careful design, operation, and improvement of business processes;
- the competitive potential of sound operations management;

and acquire the skills to

- analyze any business to uncover opportunities for operational improvement;
- make recommendations for improvements along the dimensions of efficiency, quality, and speed.

TEACHING/LEARNING METHODOLOGY

This course is largely a series of case analyses and discussions. Prior to each session, complete the case preparations. Suggested case questions to help you prepare for case discussions are in the syllabus. In class, close your laptop and put it away; open up the case; and have a calculator handy to help with arithmetic. The primary learning materials for the class consist of cases, articles and the following:

Matching Supply with Demand (ISBN: 0-07-3525200, McGraw-Hill) by Gerard Cachon and Christian Terweisch. (This is as close to a textbook as we have in this course. But we shall use this book less as a text and more as a reference and a supplementary resource. Please glance at the assigned chapters of this text – referred to in the detailed course outline as C&T – before class. If you want to read, read somewhat lightly. Go back for a re-read as you deem useful after we discuss the topic in class.)

The Goal: A Process of Ongoing Improvement Audio CD (ISBN-10: 9781598870640, Highbridge Audio) by E. Goldratt and J. Cox. (This international best seller is a novel that captures many of the critical concepts and issues in operations. According to *Financial Times*, "The only book that [managers] have actually read right through over the years is THE GOAL." The book is funny yet deep, requiring careful reading.)

Critical Chain (ISBN: 0-88427-153-6, North River Press) by E. Goldratt. (This is project management in practice – a la Goldratt.)

You and I will work together to create the best learning environment that we can. Please let me know throughout the semester, individually or collectively, 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:

| Class Contribution | 20 % |
|------------------------------------|------|
| Group Case Reports (4) | 14 % |
| Group Homework (2) | 12% |
| Group Midterm | 14% |
| Final Exam (November 30, 1-5 p.m.) | 40 % |
| Total | 100% |

The MBA Programs Committee approved the following target grade distribution for this course: A (4.0) 25%, A- (3.67) 20%, B+ (3.33) 15%, B (3.0) 35%, B- or below (2.67) 5%. This course uses that target distribution as a guideline for establishing final grades.

Group Case Report, Homework and Midterm assignments will be posted on Blackboard/Assignment. Please use your study group for these assignments. The final exam is an in-class individual case-analysis assignment. A sample final exam will be posted on Blackboard/Assignments.

GRADING OF CLASS CONTRIBUTION

At the end of the semester I shall ask you to assess the class contribution of your peers. Peer assessment will be the primary determinant of your class contribution grade in the course. How should you assess class contribution of your peers? Prof. John Burrows contributed the following:

<u>Grade</u> (These guidelines were made popular by Professor Richard J. Murnane at the Harvard Graduate School of Education. Prof. Murnane learned of them from someone else.)

- A Contributions in class reflect exceptional preparation. If this person were not a member of the class, the quality of discussion would be diminished markedly.
- **B** Contributions in class reflect satisfactory preparation. If this person were not a member of the class, the quality of discussion would be diminished somewhat.
- C This person says little or nothing in class. If this person were not a member of the class, the quality of discussion would not be changed.
- **D** Contributions in class reflect inadequate preparation. If this person were not a member of the class, valuable air-time would be saved.

Some of the things that have an impact on effective class contribution are the following:

- ✓ No single individual should dominate the discussion. Make your points, and then let others have a chance to make theirs. An "equal time" rule will be in effect.
- ✓ Is the contributor a good listener? (e.g., a sign is whether the person merely repeats what others have just said)
- ✓ Is the contributor willing to interact with other class members?
- ✓ Are the points that are made relevant to the discussion? Are they linked to the comments of others? Are they linked to current or past course material?

- ✓ Do the comments add to our understanding of the situation?
- ✓ Are the comments critical, but also constructive and respectful of different points of view (even when you strongly disagree)?

The highest professional standards are expected of all members of the McCombs community. The collective class reputation and the value of the Texas MBA experience hinges on this.

You should treat the Texas MBA classroom as you would a corporate boardroom.

Faculty are expected to be professional and prepared to deliver value for each and every class session. Students are expected to be professional in all respects. The Texas MBA classroom experience is enhanced when:

- Students arrive on time. On time arrival ensures that classes are able to start and finish at the scheduled 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 do not confuse the classroom for the cafeteria. The classroom (boardroom) is not the place to eat your breakfast tacos, wraps, sweet potato fries, or otherwise set up for a picnic. Please plan accordingly. Recognizing that back-to-back classes sometimes take place over the lunch hour, energy bars and similar snacks are permitted. Please be respectful of your fellow students and faculty in your choices.
- **Students minimize unscheduled personal breaks.** The learning environment improves when disruptions are limited.
- Students are fully prepared for each class. Much of the learning in the Texas MBA program takes place during classroom discussions. When students are not prepared they cannot contribute to the overall learning process. This affects not only the individual, but their peers who count on them, as well.
- Students attend the class section to which they are registered. Learning is enhanced when class sizes are optimized. Limits are set to ensure a quality experience. When section hopping takes place some classes become too large and it becomes difficult to contribute. When they are too small, the breadth of experience and opinion suffers.
- Students respect the views and opinions of their colleagues. Disagreement and debate are encouraged. Intolerance for the views of others is unacceptable.
- Laptops are closed and put away. When students are surfing the web, responding to e-mail, instant messaging each other, and otherwise not devoting their full attention to the topic at hand they are doing themselves and their peers a major disservice. Those around them face additional distraction. Fellow students cannot benefit from the insights of the students who are not engaged. Faculty office hours are spent going over class material with students who chose not to pay attention, rather than truly adding value by helping students who want a better understanding of the material or want to explore the issues in more depth. Students with real needs may not be able to obtain adequate help if faculty time is spent repeating what was said in class. There are often cases where learning is enhanced by the use of laptops in class. Faculty will let you know when it is appropriate to use them. In such cases, professional behavior is exhibited when misuse does not take place.
- Phones and wireless devices are turned off. We've all heard the annoying ringing in the middle of a meeting. Not only is it not professional, it cuts off the flow of discussion when the search for the offender begins. When a true need to communicate with someone outside of class exists (e.g., for some medical need) please inform the professor prior to class.

Remember, you are competing for the best faculty McCombs has to offer. Your professionalism and activity in class contributes to your success in attracting the best faculty to this program.

Academic Dishonesty

I have no tolerance for acts of academic dishonesty. Such acts damage the reputation of the school and the degree and demean the honest efforts of the majority of students. The minimum penalty for an act of academic dishonesty will be a zero for that assignment or exam.

The responsibilities for both students and faculty with regard to the Honor System are described on on the final pages of this syllabus. As the instructor for this course, I agree to observe all the faculty responsibilities described therein. As a Texas MBA student, you agree to observe all of the student responsibilities of the Honor Code. If the application of the Honor System to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification.

As specific guidance for this course,

- (1) Do not use case solutions from previous semesters or from other sources.
- (2) The group case reports should be prepared without any help from outside your group.
- (3) The final exam is strictly an individual assignment.
- (4) Group study for learning the course material is encouraged. Group preparation for case discussions and the final examination is acceptable and encouraged.

Students with Disabilities

Upon request, the University of Texas at Austin provides appropriate academic accommodations for qualified students with disabilities. Services for Students with Disabilities (SSD) is housed in the Office of the Dean of Students, located on the fourth floor of the Student Services Building. Information on how to register, downloadable forms, including guidelines for documentation, accommodation request letters, and releases of information are available online at ttp://deanofstudents.utexas.edu/ssd/index.php. Please do not hesitate to contact SSD at (512) 471-6259, VP: (512) 232-2937 or via e-mail if you have any questions.

Honor Code Purpose

Academic honor, trust and integrity are fundamental to The University of Texas at Austin McCombs School of Business community. They contribute directly to the quality of your education and reach far beyond the campus to your overall standing within the business community. The University of Texas at Austin McCombs School of Business Honor System promotes academic honor, trust and integrity throughout the Graduate School of Business. The Honor System relies upon The University of Texas Student Standards of Conduct (Chapter 11 of the Institutional Rules on Student Service and Activities) for enforcement, but promotes ideals that are higher than merely enforceable standards. Every student is responsible for understanding and abiding by the provisions of the Honor System and the University of Texas Student Standards of Conduct. The University expects all students to obey the law, show respect for other members of the university community, perform contractual obligations, maintain absolute integrity and the highest standard of individual honor in scholastic work, and observe the highest standards of conduct. Ignorance of the Honor System or The University of Texas Student Standards of Conduct is not an acceptable excuse for violations under any circumstances.

The effectiveness of the Honor System results solely from the wholehearted and uncompromising support of each member of the McCombs School community. Each member must abide by the Honor System and must be intolerant of any violations. The system is only as effective as you make it.

Faculty Involvement in the Honor System

The University of Texas at Austin McCombs School of Business Faculty's commitment to the Honor System is critical to its success. It is imperative that faculty make their expectations clear to all students. They must also respond to accusations of cheating or other misconduct by students in a timely, discrete and fair manner. We urge faculty members to promote awareness of the importance of integrity through in-class discussions and assignments throughout the semester.

Expectations Under the Honor System

Standards

If a student is uncertain about the standards of conduct in a particular setting, he or she should ask the relevant faculty member for clarification to ensure his or her conduct falls within the expected scope of honor, trust and integrity as promoted by the Honor System. This applies to all tests, papers and group and individual work. Questions about appropriate behavior during the job search should be addressed to a professional member of the Career Management Office. Below are some of the specific examples of violations of the Honor System.

Lying

Lying is any deliberate attempt to deceive another by stating an untruth, or by any direct form of communication to include the telling of a partial truth. Lying includes the use or omission of any information with the intent to deceive or mislead. Examples of lying include, but are not limited to, providing a false excuse for why a test was missed or presenting false information to a recruiter.

Stealing

Stealing is wrongfully taking, obtaining, withholding, defacing or destroying any person's money, personal property, article or service, under any circumstances. Examples of stealing include, but are not limited to, removing course material from the library or hiding it from others, removing material from another person's mail folder, securing for one's self unattended items such as calculators, books, book bags or other personal property. Another form of stealing is the duplication of copyrighted material beyond the reasonable bounds of "fair use." Defacing (e.g., "marking up" or highlighting) library books is also considered stealing, because, through a willful act, the value of another's property is decreased. (See the appendix for a detailed explanation of "fair use.")

Cheating

Cheating is wrongfully and unfairly acting out of self-interest for personal gain by seeking or accepting an unauthorized advantage over one's peers. Examples include, but are not limited to, obtaining questions or answers to tests or quizzes, and getting assistance on case write-ups or other projects beyond what is authorized by the assigning instructor. It is also cheating to accept the benefit(s) of another person's theft(s) even if not actively sought. For instance, if one continues to be attentive to an overhead conversation about a test or case write-up even if initial exposure to such information was accidental and beyond the control of the student in question, one is also cheating. If a student overhears a conversation or any information that any faculty member might reasonably wish to withhold from the student, the student should inform the faculty member(s) of the information and circumstance under which it was overheard.

Actions Required for Responding to Suspected and Known Violations

As stated, everyone must abide by the Honor System and be intolerant of violations. If you suspect a violation has occurred, you should first speak to the suspected violator in an attempt to determine if an infraction has taken place. If, after doing so, you still believe that a violation has occurred, you must tell

the suspected violator that he or she must report himself or herself to the course professor or Associate Dean of the McCombs School of Business. If the individual fails to report himself or herself within 48 hours, it then becomes your obligation to report the infraction to the course professor or the Associate Dean of the McCombs School of Business. Remember that although you are not required by regulation to take any action, our Honor System is only as effective as you make it. If you remain silent when you suspect or know of a violation, you are approving of such dishonorable conduct as the community standard. You are thereby precipitating a repetition of such violations.

The Honor Pledge

The University of Texas at Austin McCombs School of Business requires each enrolled student to adopt the Honor System. The Honor Pledge best describes the conduct promoted by the Honor System:

"I affirm that I belong to the honorable community of The University of Texas at Austin Graduate School of Business. I will not lie, cheat or steal, nor will I tolerate those who do."

"I pledge my full support to the Honor System. I agree to be bound at all times by the Honor System and understand that any violation may result in my dismissal from the McCombs School of Business."

The following pages provide specific guidance about the Standard of Academic Integrity at the University of Texas at Austin. Please read it carefully and feel free to ask me any questions you might have.

Excerpts from the University of Texas at Austin Office of the Dean of Students website (http://deanofstudents.utexas.edu/sjs/acint_student.php)

The Standard of Academic Integrity

A fundamental principle for any educational institution, academic integrity is highly valued and seriously regarded at The University of Texas at Austin, as emphasized in the standards of conduct. 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 (Sec. 11-801, Institutional Rules on Student Services and Activities). 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 <u>Chapter 11</u> of the *Institutional Rules on Student Services and Activities*.

What is Scholastic Dishonesty?

In promoting a high standard of academic integrity, the University broadly defines scholastic dishonesty—basically, all conduct that violates this standard, including *any act designed to give an unfair or undeserved academic advantage*, such as:

Cheating

- Plagiarism
- Unauthorized Collaboration
- Collusion
- Falsifying Academic Records
- Misrepresenting Facts (e.g., providing false information to postpone an exam, obtain an extended deadline for an assignment, or even gain an unearned financial benefit)
- Any other acts (or attempted acts) that violate the basic standard of academic integrity (e.g., multiple submissions—submitting essentially the same written assignment for two courses without authorization to do so)

Several types of scholastic dishonesty—<u>unauthorized collaboration</u>, <u>plagiarism</u>, and <u>multiple</u> <u>submissions</u>—are discussed in more detail on this Web site to correct common misperceptions about these particular offenses and suggest ways to avoid committing them.

For the University's official definition of scholastic dishonesty, see <u>Section 11-802</u>, *Institutional Rules on Student Services and Activities*.

Unauthorized Collaboration

If you work with another person on an assignment for credit without the instructor's permission to do so, you are engaging in unauthorized collaboration.

- This common form of academic dishonesty can occur with all types of scholastic work—papers, homework, tests (take-home or in-class), lab reports, computer programming projects, or any other assignments to be submitted for credit.
- For the University's official definitions of unauthorized collaboration and the related offense of collusion, see Sections 11-802(c)(6) & 11-802(e), Institutional Rules on Student Services and Activities.

Some students mistakenly assume that they can work together on an assignment as long as the instructor has not expressly prohibited collaborative efforts.

• Actually, students are expected to complete assignments independently unless the course instructor indicates otherwise. So working together on assignments is *not* permitted unless the instructor specifically approves of any such collaboration.

Unfortunately, students who engage in unauthorized collaboration tend to justify doing so through various rationalizations. For example, some argue that they contributed to the work, and others maintain that working together on an assignment "helped them learn better."

- The instructor—not the student—determines the purpose of a particular assignment *and* the acceptable method for completing it. Unless working together on an assignment has been specifically authorized, always assume it is not allowed.
- Many educators do value group assignments and other collaborative efforts, recognizing their potential for developing and enhancing specific learning skills. And course requirements in some classes do consist primarily of group assignments. But the expectation of individual work is the prevailing norm in many classes, consistent with the presumption of original work that remains a fundamental tenet of scholarship in the American educational system.

Some students incorrectly assume that the degree of any permissible collaboration is basically the same for all classes.

- The extent of any permissible collaboration can vary widely from one class to the next, even from one project to the next within the same class.
- Be sure to distinguish between collaboration that is authorized for a particular assignment and
 unauthorized collaboration that is undertaken for the sake of expedience or convenience to
 benefit you and/or another student. By failing to make this key distinction, you are much more
 likely to engage in unauthorized collaboration. To avoid any such outcome, always seek
 clarification from the instructor.

Unauthorized collaboration can also occur in conjunction with group projects.

• How so? If the degree or type of collaboration exceeds the parameters expressly approved by the instructor. An instructor may allow (or even expect) students to work together on one stage of a group project but require independent work on other phases. Any such distinctions should be strictly observed.

Providing another student unauthorized assistance on an assignment is also a violation, even without the prospect of benefiting yourself.

- If an instructor did not authorize students to work together on a particular assignment *and* you help a student complete that assignment, you are providing unauthorized assistance and, in effect, facilitating an act of academic dishonesty. Equally important, you can be held accountable for doing so.
- For similar reasons, you should not allow another student access to your drafted or completed assignments unless the instructor has permitted those materials to be shared in that manner.

Plagiarism

Plagiarism is another serious violation of academic integrity. In simplest terms, this occurs if you represent as your own work any material that was obtained from another source, regardless how or where you acquired it.

- Plagiarism can occur with *all* types of media—scholarly or non-academic, published or unpublished—written publications, Internet sources, oral presentations, illustrations, computer code, scientific data or analyses, music, art, and other forms of expression. (See Section 11-802(d) of the *Institutional Rules on Student Services and Activities* for the University's official definition of plagiarism.)
- Borrowed material from written works can include entire papers, one or more paragraphs, single
 phrases, or any other excerpts from a variety of sources such as books, journal articles,
 magazines, downloaded Internet documents, purchased papers from commercial writing services,
 papers obtained from other students (including homework assignments), etc.
- As a general rule, the use of any borrowed material results in plagiarism if the original source is not properly acknowledged. So you can be held accountable for plagiarizing material in either a final submission of an assignment *or* a draft that is being submitted to an instructor for review, comments, and/or approval.

Using *verbatim* material (e.g., exact words) without proper attribution (or credit) constitutes the most blatant form of plagiarism. However, other types of material can be plagiarized as well, such

as *ideas* drawn from an original source or even its *structure* (e.g., sentence construction or line of argument).

• Improper or insufficient paraphrasing often accounts for this type of plagiarism. (See additional information on paraphrasing.)

Plagiarism can be committed intentionally or unintentionally.

- Strictly speaking, any use of material from another source without proper attribution constitutes
 plagiarism, regardless why that occurred, and any such conduct violates accepted standards of
 academic integrity.
- Some students deliberately plagiarize, often rationalizing this misconduct with a variety of excuses: falling behind and succumbing to the pressures of meeting deadlines; feeling overworked and wishing to reduce their workloads; compensating for actual (or perceived) academic or language deficiencies; and/or justifying plagiarism on other grounds.
- But some students commit plagiarism without intending to do so, often stumbling into negligent plagiarism as a result of sloppy notetaking, insufficient paraphrasing, and/or ineffective proofreading. Those problems, however, neither justify nor excuse this breach of academic standards. By misunderstanding the meaning of plagiarism and/or failing to cite sources accurately, you are much more likely to commit this violation. Avoiding that outcome requires, at a minimum, a clear understanding of plagiarism *and* the appropriate techniques for scholarly attribution. (See related information on paraphrasing; notetaking and proofreading; and acknowledging and citing sources.)

By merely changing a few words or rearranging several words or sentences, you are *not* paraphrasing. Making minor revisions to borrowed text amounts to plagiarism.

• Even if properly cited, a "paraphrase" that is too similar to the original source's wording and/or structure is, in fact, plagiarized. (See additional information on <u>paraphrasing</u>.)

Remember, your instructors should be able to clearly identify which materials (e.g., words and ideas) are your own *and* which originated with other sources.

 That cannot be accomplished without proper attribution. You must give credit where it is due, acknowledging the sources of any borrowed passages, ideas, or other types of materials, and enclosing any verbatim excerpts with quotation marks (using block indentation for longer passages).

Plagiarism & Unauthorized Collaboration

Plagiarism and unauthorized collaboration are often committed jointly.

By submitting *as your own work* any unattributed material that you obtained from other sources (including the contributions of another student who assisted you in preparing a homework assignment), you have committed plagiarism. And if the instructor did not authorize students to work together on the assignment, you have also engaged in unauthorized collaboration. Both violations contribute to the same fundamental deception—representing material obtained from another source as your own work.

Group efforts that extend beyond the limits approved by an instructor frequently involve plagiarism in addition to unauthorized collaboration. For example, an instructor may allow students to work together

while researching a subject, but require each student to write a separate report. If the students collaborate while writing their reports *and* then submit the products of those joint efforts as individual works, they are guilty of unauthorized collaboration as well as plagiarism. In other words, the students collaborated on the written assignment without authorization to do so, and also failed to acknowledge the other students' contributions to their own individual reports.

Multiple Submissions

Submitting the same paper (or other type of assignment) for two courses without prior approval represents another form of academic dishonesty.

You may not submit a substantially similar paper or project for credit in two (or more) courses unless expressly authorized to do so by your instructor(s). (See <u>Section 11-802(b)</u> of the *Institutional Rules on Student Services and Activities* for the University's official definition of scholastic dishonesty.)

You may, however, re-work or supplement previous work on a topic with the instructor's approval.

Some students mistakenly assume that they are entitled to submit the same paper (or other assignment) for two (or more) classes simply because they authored the original work.

Unfortunately, students with this viewpoint tend to overlook the relevant ethical and academic issues, focusing instead on their own "authorship" of the original material and personal interest in receiving essentially double credit for a single effort.

Unauthorized multiple submissions are inherently deceptive. After all, an instructor reasonably assumes that any completed assignments being submitted for credit were actually prepared for that course. Mindful of that assumption, students who "recycle" their own papers from one course to another make an effort to convey that impression. For instance, a student may revise the original title page or imply through some other means that he or she wrote the paper for that particular course, sometimes to the extent of discussing a "proposed" paper topic with the instructor or presenting a "draft" of the paper before submitting the "recycled" work for credit.

The issue of plagiarism is also relevant. If, for example, you previously prepared a paper for one course and then submit it for credit in another course without citing the initial work, you are committing plagiarism—essentially "self-plagiarism"—the term used by some institutions. Recall the broad scope of <u>plagiarism</u>: all types of materials can be plagiarized, including unpublished works, even papers you previously wrote.

Another problem concerns the resulting "unfair academic advantage" that is specifically referenced in the University's definition of scholastic dishonesty. If you submit a paper for one course that you prepared and submitted for another class, you are simply better situated to devote more time and energy toward fulfilling other requirements for the subsequent course than would be available to classmates who are completing all course requirements during that semester. In effect, you would be gaining an unfair academic advantage, which constitutes academic dishonesty as it is defined on this campus.

Some students, of course, do recognize one or more of these ethical issues, but still refrain from citing their authorship of prior papers to avoid earning reduced (or zero) credit for the same works in other classes. That underlying motivation further illustrates the deceptive nature of unauthorized multiple submissions.

An additional issue concerns the problematic minimal efforts involved in "recycling" papers (or other prepared assignments). Exerting minimal effort basically undercuts the curricular objectives associated with a particular assignment and the course itself. Likewise, the practice of "recycling" papers subverts important learning goals for individual degree programs and higher education in general, such as the mastery of specific skills that students should acquire and develop in preparing written assignments. This demanding but necessary process is somewhat analogous to the required regimen of athletes, like the numerous laps and other repetitive training exercises that runners must successfully complete to prepare adequately for a marathon.

OPERATIONS MANAGEMENT: DETAILED COURSE OUTLINE

SESSION 1 (Th, Aug. 16, 1-5) PROCESS DESIGN; INNOVATION FACTORY

Readings: 1. Chapters 1, 2 & 3 (C&T)

2. Deep Change: How Operational Innovation Can Transform Your Company

3. Benihana of Tokyo

4. IDEO Product Development

Case: BENIHANA OF TOKYO

Case Questions:

- 1. Compare the operating figures of a typical restaurant with those of Benihana based on the following factors: food and beverage costs, labor, and rent. Why are costs lower at Benihana?
- 2. What design choices facilitate dining in less than an hour?
- 3. 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?
- 4. What is the Benihana concept? What are Benihana's target markets (internal & external)? Benihana's operating strategy? Benihana's facilities?

Case: IDEO Product Development

Case Questions:

1. How do you characterize IDEO's 'process'?

SESSION 2 (Sa, Aug. 19, 8-12) VARIABILITY; MANAGEMENT OF QUEUES

Readings: 1. Chapter 8 (C&T)

2. Want to Perfect Your Company's Service?

3. Manzana Insurance

Case: MANZANA INSURANCE

Case Ouestions:

- 1. What is the major competitive threat faced by Fruitvale?
- 2. What bottlenecks are revealed by the utilization analysis shown below?
- 3. It is commonly believed at Fruitvale that RUNs are the most profitable jobs? Is this belief justified?

- 4. Consider how TAT (turnaround time) is calculated (page 6 and Exhibit 3). Does this TAT reflect Fruitvale's actual flow time performance? Why or why not?
- 5. Make a few recommendations to improve Fruitvale's performance.

MANZANA INSURANCE - Utilization Analysis (1991, 120 days, 450 minutes per day)

| Service Time | RUNs | RAPs | RAINs | RERUNs | Average Policy | |
|----------------------|-------------------|-------------------|-------|--------|-------------------|--|
| Means: | | | | | | |
| (From Exhibit 4) | | | | | | |
| DC | 68.5 mins. | 50.0 | 43.5 | 28.0 | 40.97 | |
| UT | 43.6 | 38.0 | 22.6 | 18.7 | 28.4 ¹ | |
| RT | 75.5 | 64.7 | 65.5 | 75.5 | 70.39 | |
| PW | 71.0 | #N/A | 54.0 | 50.1 | 54.78 | |
| Arrivals (Total): | 350 | 1798 | 451 | 2081 | 4680 | |
| (From Exhibit 7) | | | | | | |
| 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) | 11.1 ² | 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 | 07.1 ³ | 9.0 | 38.6 | 63.9 | |

^{1[(43.6)(350)+(38.0)(1798)+(22.6)(451)+(18.7)(2081)]/4680 = 28.4;}

SESSION 3 (Sa, Sep. 1, 8-12) OPERATIONAL FIT & FOCUS;

PROCESS CONTROL & CAPABILITY

Assignment Due: Group Case Report - 1

Readings: 1. Chapters 6 & 10 (C&T)

2. Southwest Airline in Baltimore

3. Quality Wireless (A)4. Quality Wireless (B)

Case: SOUTHWEST AIRLINE IN BALTIMORE;

Case Questions:

- 1. How does Southwest Airlines (SWA) compete? What are its advantages relative to other airlines? What are its disadvantages?
- 2. SWA's operations strategy has been likened to that of a flexible manufacturer. Explain.

^{2[(68.5)(350)/(4)(120)(450)] = 0.111}

^{3 15%} RAPs turned into RUNs; assumes mean service time of 71.0 mins.

- 3. The plane turnaround process requires coordination among twelve functional groups at SWA to service, in a brief period of time, an incoming plane and match it up with its new passengers and baggage for a prompt departure. Please evaluate the plane turnaround process at Baltimore resource utilization, capacity, bottlenecks, information flows, etc. How is the process working?
- 4. Why is the operational performance at Baltimore eroding?

Case: QUALITY WIRELESS (A)

Case Ouestions:

- 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? What would be the sigma capability of the process?
- 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. Do you think that the performance of the call center has improved?

Case: QUALITY WIRELESS (B)

Case Ouestions:

- 1. What do you think of Jackson's management approach?
- 2. 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?
- 3. What would you do if you were in Jackson's position?

SESSION 4 (F, Sep. 14, 1:30-5:30) TOYOTA PRODUCTION SYSTEM

Assignment Due: Group Homework - 1 Readings: 1. Chapter 11 (C&T)

2.The Lean Service Machine3. Lean Knowledge Work4. Toyota Motor Manufacturing

Case: TOYOTA MOTOR MANUFACTURING

Case Questions:

- 1. Assembly comprises 769 team members, which means 385 per shift covering 353 stations. What does this say about the scale of 'non-essential' work? For example, the scale of rework operations?
- 2. 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)?
- 3. 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%? How many fewer cars are produced per shift if the run ratio is 85%?

- 4. 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 throughput time? After subtracting the time a seat spends: traveling on TMM's overhead seat conveyor line (about 250 meters), waiting on TMM's staging line, 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?
- 5. "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 half-an-hour?
- 6. What can Doug do to address the seat quality problem?

SESSION 5 (F, Sep. 28, 8-12) EXTENDING JUST-IN-TIME

Assignment Due: Group Case Report - 2

Readings: 1. Chapters 12, 13 & 14 (C&T)

2. Barilla SpA (A)

Case: BARILLA SPA (A)

Case Questions:

- 1. Diagnose the underlying causes of the difficulties that the JITD program was created to solve. What are the benefits and drawbacks of this program?
- 2. What conflicts or barriers internal to Barilla does the JITD program create? What causes these conflicts? As Giorgio Maggiali, how would you deal with these?
- 3. As one of Barilla's customers, what would your response to JITD be? Why?
- 4. In the environment in which Barilla operated in 1990, do you believe JITD (or a similar kind of program) would be feasible? Effective? If so, which customers would you target next? How would you convince them that the JITD program was worth trying? If not, what alternatives would you suggest to combat some of the difficulties that Barilla's operating system faces?

SESSION 6 (Sa, Sep. 29, 1-5) SUPPLY CHAIN EXCELLENCE

Assignment Due: Group Midterm

Readings: 1. Chapters 15, 16 & 17 (C&T)

2. Sport Obermeyer

Case: SPORT OBERMEYER

Case Ouestions:

- 1. Retailers, designers, sewing factories, fabric dyers/printers, and manufacturers of zippers, buttons and labels are a few of the many players comprising Obermeyer's globally dispersed supply chain for skiwear. How would you characterize the role played by Sport Obermeyer in this 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. Understand that an item could be ordered in November and again after the Las Vegas show. However, 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 less risky for early production using non-reactive capacity, and why?

Obermeyer's ability to fine-tune supply of each style is constrained by minimum order quantities. How does the attractiveness/riskiness of a style for early production depend on the minimum order size? Consider the Isis style (Exhibit 10) and the following minimum order size scenarios: (i) 500 units; (ii) 1200 units; and (iii) 800 units. Does the fact that the minimum order size is 500 units (rather than 1200 or 800 units) help you at all in deciding whether to order Isis in November?

3. A number of factors constrain Obermeyer's ability to produce so as to match supply and 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. Based on your understanding of the course cases and other class material throughout the semester, discuss how Obermeyer should 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 7 (Sa, Oct. 13, 8-12) OPERATIONAL HEDGING

Assignment Due: Group Homework - 2

Readings: 1. Chapters 15, 16 & 17 (C&T)

2. Seagate Technology

Case: SEAGATE TECHNOLOGY

Case Questions:

The discussion questions 2, 3 and 4 on page 414 of the case.

SESSION 8 (F, Oct. 26, 1:30-5:30) NEW PRODUCT DEVELOPMENT; PROJECT MANAGEMENT

Assignment Due: Group Case Report - 3

Readings: 1. *Critical Chain* by Goldratt

2. Chapter 5 (C&T)

2. Creating Project Plans to Focus Product Development

3. Medtronic

4. Sasken's Experience

Case: MEDTRONIC

Case Questions:

- 1. Review the history of how Medtronic nearly lost its position as market leader in the 1970s and 1980s. Try to chart on a piece of paper what the root causes of those outcomes were.
- 2. Which of the improvements in the new product development process strike you as having been particularly critical to turning the company around?
- 3. What do the concepts of *product line architecture* and *train schedule* mean in the pacemaker business? What are the costs and benefits of implementing these concepts? What elements of Medtronic's approach could be applied in very different business settings?
- 4. Evaluate the nature of senior management involvement in Medtronic's implementation of its product development system. Which elements of the system does senior management need to be intimately involved in, and which can it delegate or pay less attention to?

Case: SASKEN'S EXPERIENCE

Case Questions:

- 1. How should one encourage process discipline with regard to time pressure and quality expectations on a product development team?
- 2. How should evolving and ambiguous requirements be dealt with in n ew product development?
- 3. What methods can be used by project managers to satisfy a highly quality-conscious customer?
- 4. How should communication and coordination problems be dealt with in a distributed team setup?
- 5. How might one justify upfront investment in product development in a predominantly service oriented firm?

SESSION 9 (F, Nov. 9, 8-12) INNOVATION;

WHAT IS PROCESS ORIENTATION?

Assignment Due: Group Case Report - 4
Readings: 1. Chapter 19 (C&T)
2. Building Watson

Case: Building Watson

Case Questions:

- 1. How different is the question answering problem from search?
- 2. What did the funnel of ideas look like? Did they know if new algorithm were broadening the funnel, or was this purely trial and error?
- 3. What is the approach to product development? Can you compare it to other cases that you have seen?
- 4. What other areas can they apply this capability to? Is the Jeopardy! problem unique?

SESSION 10 (Sa, Nov. 10, 1-5) INTEGRATING THE PIECES; SAMPLE FINAL EXAM

Readings: 1. Chapter 18 (C&T)

2. Shouldice Hospital

Case: SHOULDICE HOSPITAL

Case Ouestions:

Please look up the Sample Final Exam on Blackboard/Assignments.

SESSION 11 (F, Nov. 30, 1-5) FINAL EXAM

Texas Executive MBA BA 380N: Operations Management Fall 2012 Course Outline

| Session | Day | Date | Time | Topic(s) | Case(s) | Assignment Due |
|---------|-----|-------|-------|------------------------------|----------------------------|----------------|
| 1 | Th | 8/16 | 1-5 | Process Design; | Benihana of Tokyo; | |
| | | | | Innovation Factory | IDEO Product Development | |
| 2 | Sa | 8/19 | 8-12 | Variability; | Manzana Insurance | |
| | | | | Management of Queues | | |
| 3 | Sa | 9/1 | 8-12 | Operational Fit & Focus; | Southwest; | Group Case |
| | | | | Process Control & Capability | Quality Wireless (A) & (B) | Report - 1 |
| 4 | F | 9/14 | 1:30- | Toyota Production System | Toyota Motor Mfg | Group |
| | | | 5:30 | | | Homework - 1 |
| 5 | F | 9/28 | 8-12 | Extending Just-in-Time | Barilla SpA (A); | Group Case |
| | | | | | | Report - 2 |
| 6 | Sa | 9/29 | 1-5 | Supply Chain Excellence | Sport Obermeyer; | Group Midterm |
| | | | | | | |
| 7 | Sa | 10/13 | 8-12 | Operational Hedging | Seagate Tech | Group |
| | | | | | | Homework - 2 |
| 8 | F | 10/26 | 1:30- | New Product Development; | Medtronic; | Group Case |
| | | | 5:30 | Project Management | Sasken's Experience | Report - 3 |
| 9 | F | 11/9 | 8-12 | Innovation; | Building Watson | Group Case |
| | | | | What is Process Orientation? | | Report - 4 |
| | | | | | | |
| 10 | Sa | 11/10 | 1-5 | Integrating the Pieces; | Shouldice Hospital | |
| | | | | Sample Final Exam | | |
| 11 | F | 11/30 | 1-5 | FINAL EXAM | | |