COURSE DESCRIPTION AND LEARNING GOALS

This course is designed to give students a better understanding of how firms can gain competitive advantage from their operations function. Typically this requires the firm to achieve, at a minimum cost and high quality: responsiveness and adaptability to customer needs and desires, rapid time to market, process technology leadership, and sufficient and responsive capacity. A problem solving framework is developed that enables students to undertake managerial and technical analysis that should result in the desired competitive advantage. Both service and manufacturing case examples are utilized.

HOMEWORK

You will be assigned homework on a class by class basis for each topic. The homework assignments are due on the dates indicated. Assignments are to be handed in at the beginning of class. Please keep a copy of all homework submitted for reference during class.
Homeworks will be graded on a scale out of 10 and will not be accepted late. They must be prepared individually in order to receive credit. Please write clearly or type up your homework.

HOW TO PREPARE FOR CLASS DISCUSSIONS

Please read the cases carefully. Use the study questions supplied in the syllabus as a guide. Be prepared to be called upon to present the facts of a case, or carryout the analysis indicated by the study questions.

COURSE PRE-REQUISITES

None.

COURSE OUTLINE

This syllabus is tentative and subject to change.

MODULE 1: Introduction to Operating Systems: Process Analysis and Design

May 24 SESSION 1: INTRODUCTION TO OPERATIONS MANAGEMENT AND PROCESS ANALYSIS

1. Introduction to Operations Management: Course Introduction and Overview.

2. Read, analyze, and be prepared to discuss the Benihana of Tokyo case, which is available in the Electronic Coursepack. Use the following study questions as an aid in analyzing the case.

   (a) How does Benihana’s operations strategy support the overall Benihana concept?

   (b) Which parameters of Benihana’s operations influence the number of customers that a Benihana restaurant can serve per unit time?

   (c) How does the cost structure of a Benihana restaurant compare with that of a typical American restaurant? How does Benihana gain its competitive advantage?

3. Background material: Chapter 1 in Heizer and Render (H&R).

4. Homework #1: Pick up a copy of Homework #1. It is due on June 2nd.

May 26 SESSION 2: KRISTEN’S COOKIE COMPANY AND PROCESS DESIGN

1. Read, analyze and be prepared to discuss the Kristen’s Cookie Company case, which is available in the Electronic Coursepack. Utilize the six key questions at the end as a guide.

2. Background material: Chapter 7 in H&R (p. 249-262).
MODULE 2: Optimal Resource Allocation

May 31 SESSION 3: NATIONAL CRANBERRY AND INTRODUCTION TO LINEAR PROGRAMMING

1. Read, analyze and be prepared to discuss the National Cranberry case, which is available in the Electronic Coursepack.

2. Background material: Quantitative Module B: Linear Programming in H&R (p. 689-692).

June 2 SESSION 4: LP SOLUTION TECHNIQUES AND SENSITIVITY ANALYSIS

1. Bring laptops to class.


3. Homework #1 is due.

MODULE 3: Time Based Competition

June 7 SESSION 5: THE CRITICAL PATH METHOD AND PROJECT CRASHING

1. Background material: Chapter 3 in H&R (p. 55-81).

2. Homework #2 is due.

3. Homework #3: Pick up a copy of Homework #3. It is due on June 14th.

MODULE 4: Managing Quality as a Strategic Issue

June 9 SESSION 6: QUALITY ITS DEFINITION AND BASIS FOR COMPETITION

1. Preview of the next half of the course.

2. Read, analyze, and be prepared to discuss the Ford-Firestone case, which is provided on NYU Classes.


June 14 SESSION 7: STATISTICAL PROCESS CONTROL AND PROCESS YIELD

1. Read, analyze and be prepared to discuss the South Tree Electronics case, which is provided on NYU Classes.

2. Background material: Supplement to Chapter 6 in H&R (p. 217-236).

3. Homework #3 is due.

4. Homework #4: Pick up a copy of Homework #4. It is due on June 21st.
MODULE 5: Inventory Concepts and Models

June 16 SESSION 8: INTRODUCTION TO INVENTORY AND THE EOQ MODEL

1. Background material: Chapter 12 in H&R (p. 465-494).
2. Homework #5: Pick up a copy of Homework #5. It is due on June 23rd.

June 21 SESSION 9: THE NEWSVENDOR PROBLEM AND REVENUE MANAGEMENT

1. Read, analyze and be prepared to discuss the L.L. Bean Inc. case, which is available in the Electronic Coursepack.
2. Homework #4 is due.

June 23 SESSION 10: INVENTORY IN ACTION: THE BEER GAME AND SUPPLY CHAIN MANAGEMENT ROOM: TBD

1. Beer Game.
2. Debrief of the Beer Game.
5. Homework #5 is due.

MODULE 6: Time-to-Market & Responsiveness

June 28 SESSION 11: THE EFFECTS OF UNCERTAINTY AND QUEUEING THEORY

1. Read, analyze, and be prepared to discuss the First City National Bank case, which is provided on NYU Classes. The following study questions will be helpful:
   (a) Considering the data supplied for the arrival and service times, how would you calculate an average arrival rate and service rate?
   (b) As Mr. Craig, what characteristics of this queuing system would you be most interested in observing?
   (c) What is the best number of tellers to use?
   (d) Calculate the waiting time for a customer (time spent in the queue before service) and determine which of the two line configurations you would recommend. Support your result with the appropriate quantitative queuing analysis.
3. Homework #8: Pick up a copy of Homework #8. It is due on June 30th.
June 30 SESSION 12: FINAL EXAM

1. Homework #8 is due.

RECOMMENDED COURSE MATERIALS:

CUSTOM TEXT: COMPETITIVE ADVANTAGE FROM OPERATIONS, SEVENTH EDITION, Pearson Custom Publishing (available at the NYU Bookstore)

REQUIRED COURSE MATERIALS:

COMPUTER SOFTWARE: EXCEL

ELECTRONIC COURSEPACK CASES (available at the NYU Bookstore):

- BENIHANA OF TOKYO
- KRISTEN’S COOKIE COMPANY
- NATIONAL CRANBERRY
- L.L. BEAN, INC.

OTHER MATERIAL (available on NYU Classes):

- FORD-FIRESTONE CASE
- SOUTH TREE ELECTRONICS CASE
- FIRST CITY NATIONAL BANK CASE

OPTIONAL READING:


GRADING

Attendance and Class Participation: 10%

Homework: 35%

Final Exam: 55%

All exams in this course are closed book and closed notes unless otherwise indicated by the instructor. The use of a scientific calculator which does not have memory is allowed on the exams.

REGRADING
The process of assigning grades is intended to be one of unbiased evaluation. Students are encouraged to respect the integrity and authority of the professor’s grading system and are discouraged from pursuing arbitrary challenges to it.

If you believe an inadvertent error has been made in the grading of an individual assignment or in assessing an overall course grade, a request to have the grade re-evaluated may be submitted. You must submit such requests in writing within 7 days of receiving the grade, including a brief written statement of why you believe that an error in grading has been made.

**PROFESSIONAL RESPONSIBILITIES FOR THIS COURSE**

**Attendance**

Class attendance is essential to your success in this course and is part of your grade. An excused absence can only be granted in cases of serious illness, grave family emergencies, or religious observance and must be documented. Job interviews and incompatible travel plans are considered unexcused absences. When possible, please notify me in advance of an excused absence.

**Participation**

In-class contribution is a significant part of your grade and an important part of our shared learning experience. Your active participation helps me to evaluate your overall performance. You can excel in this area if you come to class on time and contribute to the course by:

- Providing strong evidence of having thought through the material.
- Advancing the discussion by contributing insightful comments and questions.
- Listening attentively in class.
- Demonstrating interest in your peers’ comments, questions, and presentations.
- Giving constructive feedback to your peers when appropriate.

**Assignments**

Late assignments will either not be accepted or will incur a grade penalty unless due to documented serious illness or family emergency. Exceptions to this policy will only be made available when the assignment cannot reasonably be completed prior to the due date and you make arrangements for late submission in advance.

**Classroom Norms**

Arrive to class on time and stay to the end of the class period. Chronically arriving late or leaving class early is unprofessional and disruptive to the entire class. Repeated tardiness will have an impact on your grade.
Turn off all electronic devices prior to the start of class. Laptops, cell phones and other electronic devices are a distraction to everyone.

**STERN POLICIES**

**General Behavior**

The School expects that students will conduct themselves with respect and professionalism toward faculty, students, and others present in class and will follow the rules laid down by the instructor for classroom behavior. Students who fail to do so may be asked to leave the classroom.

**Course Evaluations**

Course evaluations are important to us and to students who come after you. Please complete them thoughtfully.

**ACADEMIC INTEGRITY**

Integrity is critical to the learning process and to all that we do here at NYU Stern. As members of our community, all students agree to abide by the NYU Stern Student Code of Conduct, which includes a commitment to:

- Exercise integrity in all aspects of one’s academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.

- Clearly acknowledge the work and efforts of others when submitting written work as ones own. Ideas, data, direct quotations (which should be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others should be fully referenced.

- Refrain from behaving in ways that knowingly support, assist, or in any way attempt to enable another person to engage in any violation of the Code of Conduct. Our support also includes reporting any observed violations of this Code of Conduct or other School and University policies that are deemed to adversely affect the NYU Stern community.

**RECORDING OF CLASSES**

Your class may be recorded for educational purposes.

**STUDENTS WITH DISABILITIES**

If you have a qualified disability and will require academic accommodation of any kind during this course, please notify me at the beginning of the course and provide a letter from the Moses Center for Students with Disabilities (CSD, 998-4980, www.nyu.edu/csd) verifying your registration and outlining the accommodations they recommend.