

## BA502 Operations Management

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### Course overview

The goal of this course is to give you a solid foundation and a set of analytical tools for understanding the decisions and tradeoffs managers must make as they direct the operations of a firm.

Why should *you* study operations? Some students who enroll in this course will start their own companies or go to work in the operations of a manufacturing or service company; for these people the course is essential. Many more will go to work in professional services, such as investment banks or consulting firms. Here, too, a good set of diagnostic and analytical tools in operations is invaluable. Consulting engagements often have a large operational component, the consultants helping the client company to restructure its operations. To properly value a merger or acquisition, investment bankers must understand the costs and benefits of combining the companies' operations.

This course introduces the issues faced by operations managers, the decisions they make, and the tools they need to make these decisions. As an introductory course, it will focus more on the breadth of the topics than the depth. In particular, we will discuss the following topics:

**Process Design and Analysis:** How to design an efficient process? How to find areas for improvement and restructure the process for better performance?

**Statistical Process Control (SPC):** How do you know if the process is operating normally (in control)? And when is it time to intervene and fix the process? We will learn to use statistical tools designed for this.

**Queueing System:** The study of waiting lines. How long will the customers have to wait in line? What are the costs? How to manage the waiting time?

**Supply Chain Management:** What happens when operations span several interacting firms in a supply chain?

**Inventory Management:** How much is enough? Too much of it and your money is lying idly in the warehouse; Too little of it and you lose customers and your reputation. We'll learn to model this tradeoff and make optimal decisions.

**Sustainable Operations:** What does it mean to operate in a sustainable way and how do you achieve it? We'll look at the triple bottom line: environmental, economic, and social objectives when designing a sustainable operation.

### Course materials

1) Required Custom e-Textbook "Operations Management" by McGrawHill Create available at: <https://www.mheducation.com/highered/custom/product/9781307696875.html>

*Our bookstore has a paper-format version of the book (BA 502 Shunko, ISBN 9781309066966) - this version of the book is almost identical, except for one chapter on Statistical Process Control. You can freely use either version of the book. The same book was used last year.*

## 2) Required Book:

*The Goal: A Process of On-going Improvement* by Goldratt and Cox, Third Edition.

The book is available at the bookstore and from other source, e.g.

<http://www.amazon.com/The-Goal-Process-Ongoing-Improvement/dp/0884271951>

You can also get this book in different electronic formats (digital, audio, etc).

## 3) Online coursepack with cases, which you can purchase directly from HBSP using this [link](#)

[HBSP coursepack](#) contains the following cases.

- American Connector Company
- Shouldice Hospital
- National Cranberry
- Pancho's Burritos
- Holiday Inventory Planning at Dolores OU
- Beautiful Bags
- Coda Coffee

## 4) Other Materials:

Blank and annotated slides, homework sets and solutions, sample exams and solutions, and supplemental files will be posted on Canvas.

## 5) Solutions to textbook problems with \*\* are available at: [http:// cachon-terwiesch.net/3e/solved.php](http://cachon-terwiesch.net/3e/solved.php)

## Homework assignments

Homework assignments are **individual** and should display your original work. I understand that you may talk to your classmates about the problems, which is OK. However, there should be no discussion and/or sharing of solutions / answers with your peers. Homework deadlines are specified in the course schedule.

Since I will post solutions very shortly after the homework deadline, no late assignments can be accepted!

## Case assignments

All case assignments are to be submitted in teams through Canvas. For all case assignments, answer the questions posted on Canvas - There is no need to write an additional executive summary, conclusion etc. for your cases in this class. Be concise and to the point. Imagine that you are submitting a report to your upper management who have no time to read anything extraneous. When you need to make assumptions, state them clearly and explain why you are using them.

All case assignments are to be done in your study teams. Please note that all case assignments are due at **11:59 pm** on the night before class days specified in the schedule.

## Online quizzes

The quizzes will appear on Canvas on most Thursdays at **noon** (on days specified in the course schedule) and you will have until **11:59 pm** on following Monday to take it. Once you open the quiz, you will have 20 minutes to respond to about 5 multiple choice, True/False, and short answer questions. Notice that you will have only one attempt to submit your answers. The questions are designed to make sure that you are following the material and are not falling behind. I will publish the answers after the deadline, and we will discuss them during the Friday review sessions. The quizzes are to be done individually and are open book, open notes. In order to get full credit for the quiz, you need to answer 4 out of 5 questions correctly.

## Online Midterm and Final exams

The exams have the same weight. The final is not comprehensive.

Exams will be administered on Canvas via a quiz form. It will be a 2-hour exam in terms of difficulty, but I will give you 4 hours to account for potential technical difficulties/delays. You will be able to take it at anytime during the time interval specified in the schedule.

You can use your notes, slides, class assignments, and textbook. However, you should not use any outside online sources and you should not communicate with anyone while you are working on the exam. You will need a calculator. There is a sample midterm and a sample final exam with solutions posted on Canvas.

## Supply chain game

After Class 12, you will play as Supply Chain Simulation game online. You access the game at:

<https://beergame.opexanalytics.com/#/>

Follow the instructions on Slides 20-25 of the Class 12 notes to set up the game. After you play the game, please submit [the description of your strategy together with the game report](#).

## Course grading

Activity	Grade weight	Type
Participation	3%	Individual
Homework (4 problem sets @ 5% each)	20%	Individual
Quizzes (7 quizzes @ 1% each)	7%	Individual
Supply Chain Game	2%	Team
Case Assignments (6 cases @ 3% each)	18%	Team
Midterm Exam	25%	Individual
Final Exam	25%	Individual

## Teamwork

Many assignments (cases and the game) are performed in teams in this class; I expect every team member to contribute to the final product in a fair way (this applies to case assignments and game performance).

At the end of the course, I will ask every student to confidentially evaluate other team members' contribution to the team deliverables. These evaluations will be considered in grading of all team-based work.

## Course policies

This course relies on active student learning. You are expected to attend all class sessions, come prepared, and be ready to contribute to the discussion when called upon.

Late case assignments and homework cannot be accepted - solutions will either be discussed in class or posted on Canvas immediately following the deadline.

## Academic integrity

Please treat the program, your classmates, your instructors, and yourself with respect at all times; this includes following the [Foster MBA Honor Code](#).

When working in teams, collaboration *within* the group is expected and encouraged, however, each team should work independently and submit their own work (not borrowing from other teams or from other, potentially online, resources).