All businesses face operational and pricing challenges including:
- How to configure and operate their supply chain,
- What kind of contracts to set with suppliers,
- What inventory levels to carry at various points in the supply chain,
- How to allocate products to sales channels and outlets,
- How to price their products over time to different market segments.

These challenges are often addressed individually and in isolation but, in reality, all of these decisions interact with each other at a fundamental level. This class looks at the demand and supply management challenges faced by companies in various industries and provides an introduction to the tools that can be used to address these challenges. We pay particular attention to the challenges involved in coordinating different decision areas across the firm. Specific topics covered include:
- Pricing and revenue management,
- Market segmentation,
- Customized pricing,
- Non-linear pricing,
- Markdown pricing,
- Consumer Choice Modeling,
- Inventory-service tradeoffs,
- Safety stock allocation,
- Information sharing,
- Supply chain coordination,
- Behavioral issues, fairness, trust and altruism.

Prerequisites
A basic understanding of both probabilistic and deterministic models.

Class Times
Monday and Wednesday. 1:00 – 2:30
Mudd Hall. Room 303.

Required Class Package
B8862.001/IEOR E4220 Class Pack

Required Text
(Available at the bookstore and on reserve in the Engineering Library)
General References


These books are on reserve in the Engineering Library.

Teacher

Professor Robert Phillips
Ur is 408
(212) 851-5815
rp2051@columbia.edu

Teacher Office Hours

TBD.

Teaching Assistant

TBD.

T.A. Office Hours

TBD.

Homework

There will be homework assignments throughout the class. You may work with other members on these assignments, but each student has to turn in an individual solution. Keep in mind that you will not be allowed to collaborate on the exam questions. **Homework is due at the beginning of class. There is no credit for late homework.**

Case Assignments

For classes with case assignments, each student group (three students) will turn in a maximum 5 page write-up describing their solutions. Students must be prepared to summarize the case and suggest a solution in class. I will pick students at random to summarize their case findings – your ability to do so will affect your grade.

Reading Assignments

The reading assignments will help you to better understand the material covered in class. I may pick a student at random at the beginning of class to evaluate whether you have completed the reading assignment. These pop questions will be used as a bonus – for example, I may decide to raise the letter grade of a border case student based on his/her performance on these quizzes.

Handouts

There will be class handouts for each lecture summarizing the main points covered. These handouts will also be posted on the course website.

Groups

You will work in groups of three people on the project and on the
preparation of the cases. Please e-mail the TA and let him know your group (one e-mail per group).

**Exams**

There will be one midterm exam and a final exam. For the midterm, you can bring one double-sided sheet of notes. For the final you can bring two double-sided sheets of notes.

**Grading**

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Final Exam</td>
<td>40%</td>
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<tr>
<td>Mid-term</td>
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<td>Homeworks</td>
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<td>Participation</td>
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**Deadlines**

I do not accept any late homework or any late case write-ups.