**Course Description**

This course covers an in-depth exploration of the operational issues faced by managers today, from a strategic and tactical perspective. The content of this course focuses on the understanding of a company as an open system composed of subsystems (departments) and the connections between them, which is essential to proper planning and effective operations management decision making. In addition, students will be exposed to real case-studies of Spanish businesses and guest-speakers that will explain their day to day experience managing operations.

**Learning Objectives**

By completing this course, students will:

- Value the impact of operations management on strategic decisions and the performance of organizations.
- Examine the current operations strategy of a real company and assess their competitiveness.
- Apply problem solution techniques for different processes of organizations.
- Critique current topics related to operations management and innovation.
- Design a successful outsourcing and inventory planning strategy.

**Course Prerequisites**

3 semesters of college-level micro- or macroeconomics, accounting, finance, management, or statistics. Although this course is designed to be self-contained, knowledge of the concepts of probability distributions from statistics and of breakeven point from economics will be useful for students to understand the fundamentals underlying some of the concepts they will learn in this course. Basic skills with EXCEL will also be useful. Student experience as consumers of goods and services and as employees will also serve as background information that will be useful for them to get the intuition behind some learnings.

**Methods of Instruction**

The course will be taught making use of presentations, videos to highlight concepts, readings, in class group presentations and discussion, individual home works, guest speakers and a field trip to reinforce learnings and to provide an international perspective, reading of “The Goal” to convey the theory of constraints and an individual project on operational modeling with EXCEL.

**Assessment and Final Grade**

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<tr>
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<th>Weight</th>
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<tbody>
<tr>
<td>1</td>
<td>Midterm Exam</td>
<td>25%</td>
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<tr>
<td>2</td>
<td>Final Exam</td>
<td>25%</td>
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<tr>
<td>3</td>
<td>Modeling Project</td>
<td>10%</td>
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<tr>
<td>4</td>
<td>Homework</td>
<td>10%</td>
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<tr>
<td>5</td>
<td>&quot;The Goal&quot; Project</td>
<td>10%</td>
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<tr>
<td>6</td>
<td>Class Participation</td>
<td>20%</td>
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<tr>
<td></td>
<td>TOTAL</td>
<td>100%</td>
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**Course Requirements**

Midterm Exam
Final Exam
Modeling Project

Use EXCEL to create a model to be used to determine the number of delivery trucks required for distribution in a specified region. The students will be guided throughout the quarter in the development of their individual "FMCG distribution models" in EXCEL which they will use to create the necessary analysis, graphs and tables to present their recommendation for a sales force and distribution fleet, in the form of a 5 slide PowerPoint, with the required items defined.

Homework

Homework sets will be given out during the semester for individual completion.

"The Goal" Project

The book The Goal (by Eliyahu Goldratt) will be assigned reading and the students will be required to turn in a 2-page, 500-word essay explaining the Theory of Constraints.

Class Participation

This will be a combination of: contribution to class discussion, group presentation on in class assignments and individual quizzes throughout the semester.

CIEE Barcelona Attendance Policy

Students are expected to attend all scheduled class sessions on time and be prepared for the day’s class activities. CIEE does not distinguish between justified or unjustified absences, whether due to sickness, personal emergency, inevitable transportation delay and/or other impediments. You are considered responsible of managing your own absences. Please keep in mind that exams, paper submission dates, presentations and any other course work deadlines cannot be changed.

No academic penalty will be applied if students miss up to 3 class sessions. If students miss up to 5 class sessions, students’ final course grade will drop 5 points out of 100 on the CIEE grade scale for each additional absence beyond 3 (for example a 95 will become a 90 if they reach the 4th absence, and an 85 if they reach the 5th absence). Students will automatically fail the course if they miss more than 20% of total class hours (i.e. if they exceed 5 absences).

For students who miss up to 20% of the total course hours due to extenuating circumstances, the Academic Director may allow for exceptions to the local attendance policy based on documentation such as proof of bereavement, religious observances, hospitalization etc.

Students arriving more than 10 minutes late to the class will be considered absent for a day.

N.B. Course schedule is subject to change due to study tours, excursions, or local holidays. Final schedules will be included in the final syllabus provided to students on site.

Weekly Schedule

Week 1

Class: Orientation Week

Introduction to class, class logistics:

“The Goal” required reading

The EXCEL modeling project

HW, Class participation and exams

What are Operations?

The Firm, a complex system: Finance, Production, and Marketing Operations strategy, business strategy and how operations fit in


Week 2
Operations strategy: Goals, Qualifiers and winners
Performance frontier tradeoff: efficiency vs. variety
Goods vs. Services
The role and metrics of OM, DuPont Analysis
Companies excelling through operations: Zara, IKEA

**Week 3**
Class:
Process analysis
Product design: design process, product life cycle, DFM
1 page, 250 words, how does the "service" in restaurants compare between U.S. and Spain, what drives the difference?
Process design: type and arrangement
Guest Speaker: Future of 3D printing

**Week 4**
Class:
Process flow: Little’s law
Inventory in system
Problem set system inventory levels
Reading: Dell case

**Week 5**
Class:
Holding cost, EOQ, ROP
Safety stock, Inventory turn over
Problem set Inventory

**Week 6**
Class:
Capacity, Utilization
Mid-term review

**Week 7**
Class:
Mid-Term
Bottleneck, Variability
Field Trip to Coca Cola

**Week 8**
Class:
Supply Chain: outsourcing/ off shoring
Global Marketing Director of SEAT

**Week 9**
Class:

The Beer Game
Buyer/ Supplier partnerships: VMI
Case: Barrilla pasta, VMI

**Week 10**
Class:

Guest speakers (TBD)

**Week 11**
Class:

Quality Management: History evolution

**Week 12**
Class:

Root cause analysis
Reading KT analysis deck
Continuous improvement
Reading Toyota Production System

**Week 13**
Class:

The Goal, review and turn in papers
Excel modeling Project review
Final exam

**Week 14**
Class:

Final Review. Final exam

**Course Materials**

**Readings**