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# Operations Management

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**Office hours:** by appointment

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## Course Description

Operations management (OM) is defined as the design, operation, and improvement of the systems that create and deliver the firm's primary products and services. Every organization has the Operations Function and this function has been a key element in the improvement of the productivity in businesses around the world. Creating a competitive advantage through operations requires an understanding of the main topics of the operations function. Well-managed Operations can provide significant strategic advantage to a firm as demonstrated by the success of companies like Amazon, IKEA, FedEx, INDITEX, and Toyota among others. Understanding the role of the operations function and its impact on the competitiveness of the firm is an important part of any manager's training.

## Objectives

The objectives of the course are the following:

- 1) Learn the foundational skills and concepts on Operations Management;
- 2) Learn how to develop and apply analytic tools, approaches, and techniques used in operations decision systems and management;
- 3) Develop business insights and skills and learn from business experiences in Operations Management in different industries.

## Methodology

The methodology of this course will be based on Lecture classes to learn the foundational skills and concepts; Exercises and Problem Solving to learn how to apply the analytic tools and techniques; the presentation of Case Studies, Role Payer Game and the creation of a Course Blog to develop the business insights and skills; and finally Business Visits and Presentations to learn some business experiences (to be confirmed later on). This set of highly interactive and participative activities should be done individually or in groups, and the students are expected to read and prepare them before class, and eventually deliver a report. The students are also expected to participate actively in any activity propose in the course.

## Evaluation criteria

The final grade in the course is determined as follows:

- Course Blog participation – 40%
- Online tests – 20%
- Game results and report – 20%
- Class participation – 20%

Students are required to attend 80% of classes. Failing to do so without justified reason will imply a Zero grade in the participation/attendance evaluation item and may lead to suspension from the program

As with all courses taught at the UPF BSM, students who fail the course during regular evaluation will be allowed ONE re-take of the examination/evaluation. Students that pass any Retake exam should get a **5 by default as a final grade for the course**. If the course is again failed after the retake, students will have to register again for the course the following year.

In case of a justified no-show to an exam, the student must inform the corresponding faculty member and the director(s) of the program so that they study the possibility of rescheduling the exam (one possibility being during the “Retake” period). In the meantime, the student will get an “incomplete”, which will be replaced by the actual grade after the final exam is taken. The “incomplete” will not be reflected on the student’s Academic Transcript.

Plagiarism is to use another’s work and to present it as one’s own without acknowledging the sources in the correct way. All essays, reports or projects handed in by a student must be original work completed by the student. By enrolling at any UPF BSM Master of Science and signing the “Honor Code,” students acknowledge that they understand the schools’ policy on plagiarism and certify that all course assignments will be their own work, except where indicated by correct referencing. Failing to do so may result in automatic expulsion from the program.”

## Calendar and Contents

The course will focus on latest and most important issues faced by the Operations Management area, as well as the basic tools and techniques used in the area. Some topics to be discussed include (to be confirm later on):

1. Introduction to the Operation Management
2. Operations Strategy
3. Process Analysis. Process Selection and Design
4. Supply Chain Management
5. Strategic Capacity Management
6. Sales and Operations Planning
7. Inventory Management

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Note: This document is only informational, detailed contents and faculty may change.

8. Material Requirements Planning
9. Operations Scheduling
10. Logistics and Transportation

Calendar to be announced later on.

## Reading Materials/ Bibliography/Resources

Main Textbook: F.R. Jacobs, R.B. Chase, 2018, "Operations and Supply Chain Management, 14<sup>th</sup> ed., McGraw-Hill.

Resources:

- Prof. Jacobs webpage: <http://oscm-pro.com/index.html>
- Information Center 14<sup>th</sup> Edition:

[http://higher.ed.mheducation.com/sites/0078024021/information\\_center\\_viewo/index.html](http://higher.ed.mheducation.com/sites/0078024021/information_center_viewo/index.html)

## Bio of Professor

Helena Ramalhinho Lourenço is a Full Professor at the Economics and Business Department at the [University Pompeu Fabra](#), Barcelona, Spain. She has a B.A. and Master degree in [Statistics and Operations Research from the University of Lisbon](#), Portugal, and a Ph.D. in Operations Research from [Cornell University](#), New York, USA. She has been involved in different research projects and consulting for firms in the area of Operations Research, Operations Management and Logistics. Helena has published several articles in prestigious international scientific journals and has presented her work at international congresses and conferences. Helena teaches at various undergraduate, master's and PhD's programs. She is currently the director of the [Business Analytics Research Group](#) and a researcher at the [Center for Operational Research at the University of Lisbon](#). Her research interests include Operations Research, Scheduling, Combinatorial Optimization, Metaheuristics, Iterated Local Search, Heuristic Search Optimization, Vehicle Routing, Job-Shop Scheduling, Supply Chain Management, Logistics, Production and Operations Management. Webpage for more information: [lena.upf.edu](http://lena.upf.edu)