TEACHING GUIDE - 2026-2027

Foundations of Operational Excellence

UGRA_004254

Departments	Dept. of Operations, Innovation & Data Sciences, Operations, Innovation and Technology Management (OITM)
Teaching Languages	English
ECTS	3
Teacher responsible	Juan Ignacio Moreu Hasson - juanignacio.moreu@esade.edu

Course Goals

Upon completing this course, students will:

- Understand the operations function as the organizational area that transforms a series of given inputs into desired outputs (goods and services) that provide value to the end client.

- Define a company's operations strategy based on its competitive strategy

- Be familiar with the current operations management focus that includes developing new products and processes, planning, production, and quality management.

- Understand the concepts of Industry 4.0 and Digital Transformation.

- Assess how operations can generate value in industrial and service firms by achieving greater efficiency, quality, and product/service innovations.

- Understand where operations management converges with other corporate areas.

- Apply quality and process control concepts (using a simulator) as well as total quality and business excellence concepts.

- Understand why environmental pressures have led to the introduction of sustainability concerns within firms and require the latter to develop appropriate strategies.

- Understand how corporate sustainability strategies imply adapting company management systems and influence the design of new products and services - as well as technological innovation processes.

- Study Process Improvement using lean and Six Sigma approaches.

Teaching methodology

The methodology includes:

a) Master classes - theory sessions.

b) Case study analyses and discussions. The case study method is one of the most effective teaching tools for developing analytical and decision-making skills as it requires participants to take active part in determining the conclusions.

For the case studies and related exercises, students should bear in mind the following:

- Each group must upload their responses to the assigned questions via the Moodle platform.
- These case study reports must be in PowerPoint format. There is no slide limit in the reports. However, it must be assumed that they are addressed to the case company's management team.
- Groups must send their reports 24hours in advance of the class discussion session. The system will not allow students to send their presentations after this deadline.
- Faculty may ask a random member of each team to explain his/her group's slides.

c) Carry out diverse exercises, as well as a simulation on process quality control.

d) Read and analyze the assigned articles. Students are required to read these texts prior to each session to ensure quality class discussions.

Students are expected to actively participate in class discussions. They will be marked on the quality and relevance of their contributions and well-reasoned questions and answers.

Previous preparation before class is very important, following the guidelines that will be given during the course

Description

Course contribution to program

This course contributes to the program by enabling students to:

1. Develop a basic business language and acquire in-depth knowledge of fundamental operations management concepts and tools.

2. Develop the skills needed to gain a holistic and integrated understanding

of organizations and the environments in which they operate, beyond just the functional perspectives. To achieve this, the course highlights the points at which different corporate functional areas (particularly finance, marketing, and human resources) converge and interact.

3. Demonstrate rigor, critical thinking, and creativity when applying the knowledge and skills acquired to their future professional areas of responsibility.. To support this objective, the course promotes critical reflection and analysis of readings, as well as active participation in case study discussions.

4. Contribute to a company's overall strategy from the operations function by applying an international perspective. To this end, the course explains operations strategy based on competitive strategy. Students will apply this approach when analyzing and resolving case studies.

Short description

The term "operations" is widely used around the world to describe the corporate function responsible for producing goods and services. Operations encompasses all those activities needed to create and deliver a given product or service - from sourcing to distribution. How companies organize and integrate these different activities defines their business processes. Therefore, the fundamental objective of operations managenet is the study of processes. The definition of these processes is the basis of its future digitalization.

Among the various areas within companies, operations requires the largest number of personnel and assets. Operations is also the area mainly responsible for the quality of what a company delivers to its customers. Operational innovation offers a meaningful and sustainable way to gain—and maintain—a competitive advantage.

Consequently, operations is increasingly viewed as a source of competitive advantage. Effectively managing operations is essential for turning corporate strategy into reality. Without considering the contribution of operations, any attempt to define corporate strategy risks becoming merely a theoretical exercise.

An excellent company is one that distinguishes itself within its sector by performing better than competitors. Operational Excellence is the implementation of corporate strategy in a more reliable, efficient, and consistent way than competitors. This is achieved through the design and implementation of excellent processes and their continuous improvement. Ultimately, operational excellence is reflected in company performance and

results.

This course develops the foundations of Operational Excellence, the infrastructural elements—also referred to as the “software” - of Operations Strategy. These include Innovation, Enterprise Resource Planning (ERP), Industry 4.0 and Digitalization, Quality Management, and Environmental Sustainability. In addition, the course addresses process improvement through the Lean and Six Sigma approaches.

Recent changes in the macroeconomic and social environment (for example, the COVID-19 pandemic, the Russia–Ukraine war, the Ormuz crisis and increasing competition between the United States and China) have reinforced the importance of Operations for companies and society as a whole, while also introducing significant changes in its management. These developments have driven the need for redesign of Supply chain Processes to reduce risk, encouraged a reassessment of make-or-buy decisions, and accelerated digitalization in service and manufacturing operations.

The recent changes in the macroeconomic and social environment (for example, Covid -19 Pandemic, Russia-Ukraine war, USA vs China competition) have increased the importance of Operations for companies and for society in general while introducing important changes in their management. Thus, it has forced the redesign of Supply Chain processes seeking to minimize risk, a review of "Make or Buy" decisions, an enhancement of digitalization in service and industrial operations, etc.

As stated by Stéphane Bancel, CEO of the biotechnology company Moderna, manufacturer of one vaccine against Covid-19, "Manufacturing was also a key enabler. If you have great science but cannot make a product, there's no business."

Bibliography

Krajewski, L., Ritzman, L., Malhotra, M., Operations Management: Process and Supply Chains, Pearson, ISBN-13: 9780136860938 (Book)
Jay Heizer, Barry Render, Chuck Munson, Operations Management. Sustainability and Supply Chain Management., Pearson 12th Edition., ISBN-13: 9780137476442 (Book)

Activities

In-class discussions and debates

Written and/or oral exams

If a student fails the final exam, the final course grade will be equal to the exam mark, and the continuous assessment component (group work, individual assignments, etc.) will not be weighted in the final grade calculation.

Role-play exercises and simulations

Group presentations

Readings

Interaction with visiting guest professionals

Case study analyses

Content

#	Topic
1	1. Operations strategy within the general corporate strategy framework. Globalizing Operations. a) The fundamental purpose of Operations: Processes. b) Operations strategy as a means to support corporate strategy and its relationship with other functional strategies. c) The structural ('hardware') and infrastructural ('software') elements of operations strategy. d) The globalization of operations.
2	2. Innovation management and Design Thinking. New product development. a) Definition of innovation. Types of innovation. b) Introduction to Design Thinking. c) Developing new products: Bill of Materials and product structures. d) Simultaneous Engineering.
3	3. Planning in industrial companies. Industry 4.0. a) ABC System. b) The Reorder Point and Economic Order Quantity (EOQ). c) The Sales Plan, Production Plan, and Master Production Schedule. d) From MRP to ERP. e) Industry 4.0. Digitization of operations.
4	4. Quality, quality management and total quality. Environmental management. a) Quality concept. b) Planning, control, and quality improvement. c) Quality costs. d) Statistical process control (SPC) and Six Sigma. e) The ISO 9001: 2015 standard. f) From total quality to business excellence. g) Clean production and Environmental Innovation
5	5. Lean Manufacturing and Lean Services a) Just in Time. Supporting approaches of JIT. b) Lean: concept. The eight types of 'waste'. c) Lean Process Improvement. The 5 Ss.

Assessment

Tool	Assessment tool	Category	Weight %
Written and/or oral exams	Final Exam	Ordinary round	40.00%
In-class analysis and discussion of issues	Case study reports	Ordinary round	40.00%
Participation in program activities	Participation in sessions and debates	Ordinary round	20.00%
Written and/or oral exams	Final Exam	Retake	100.00%

PROGRAMS

BBA20-Bachelor of Business Administration (BBA) (Undergraduates: Business)
BBA20 Year 2 (Mandatory)

BBA23-Bachelor of Business Administration (BBA) (Undergraduates: Business)
BBA23 Year 2 (Mandatory)

DBAI21-Double Degree in Business Administration and Artificial Intelligence for Business (Undergraduates: Business)

DBAI21 Year 3 (Mandatory)

DBAI23-Double Degree in Business Administration and Artificial Intelligence for Business (Undergraduates: Business)

DBAI23 Year 3 (Mandatory)

GBD20-Double Degree in Business Administration and Law (Undergraduates: Law)
GBD20 Year 3 (Mandatory)

GBD23-Double Degree in Business Administration and Law (Undergraduates: Law)
GBD23 Year 3 (Mandatory)

GBL24-Double Degree in Business Administration and Global Governance, Economics and Legal Order (Undergraduates: Business)

GBL24 Year 3 (Mandatory)