

**Operations Management**

Code: 102182  
ECTS Credits: 6

Degree	Type	Year	Semester
2501232 Business and Information Technology	OB	3	1

**Contact**

Name: Daniel Blabia Girau  
Email: Daniel.Blabia@uab.cat

**Use of Languages**

Principal working language: catalan (cat)  
Some groups entirely in English: No  
Some groups entirely in Catalan: Yes  
Some groups entirely in Spanish: No

**Prerequisites**

none

**Objectives and Contextualisation**

The subject considers the following teaching objectives;

- Introduce the student in the functional area of Operations, in its strategic and operational aspects, both manufacturing companies and services.
- Present the modern approach of the Production Management (Operations Management) as a foundation to achieve the integrated management of the company, placing the production system as a union of the supply, manufacturing and distribution subsystems looking for the optimization of material flows and showing its relationship with the Management and Commercial Control systems.
- That the student is able to evaluate by a company, the strategic decisions (design of goods and services, design of productive capacity, design of quality systems, ...), tactics (planning of the activity, planning of the quality, ..) and operational (allocation of resources, control and measurement of performance and quality, ...) within the scope of Operations Management.
- Train the student in the design of the layout of a production process to evaluate the resources that are necessary for its correct operation and budgeting.
- To provide the student with the theoretical concepts and methodologies and techniques necessary to achieve all of the above.

**Competences**

- Analysing, diagnosing, supporting and taking decisions in terms of organisational structure and business management.
- Appropriately drawing up technical reports according to the customer's demands.
- Carrying out different oral presentations for different audiences.
- Demonstrating a comprehension of the principles, structure, organisation and inner workings of companies and organisations.
- Demonstrating creativity and initiative.
- Identifying, analysing and solving complex problems and situations related to company organisations.
- Managing and coordinating working teams, specially interdisciplinary teams, paying particular attention to the needs and conflicts they might endure.

- Students must be capable of analysing, summarising, organising, planning and solving problems and making decisions.
- Students must be capable of searching and analysing information of different sources.

## Learning Outcomes

1. Appropriately drawing up technical reports according to the customer's demands.
2. Carrying out different oral presentations for different audiences.
3. Demonstrating creativity and initiative.
4. Describing a system of management of operations and their basic functions, differentiating the types of transactions carried out.
5. Designing specific systems of management of operations in accordance with the proposed goals, including the planning of their implementation.
6. Developing operations management strategies, defining specific objectives and designing measures of success from their implementation.
7. Identifying the resource requirements of an organisation to manage their operations, in order to achieve the proposed objectives and targets.
8. Interpreting the implications of the corporate strategy of a company for its functional area of operations.
9. Managing and coordinating working teams, specially interdisciplinary teams, paying particular attention to the needs and conflicts they might endure.
10. Students must be capable of analysing, summarising, organising, planning and solving problems and making decisions.
11. Students must be capable of searching and analysing information of different sources.

## Content

### SUBJECT I - INTRODUCTION TO THE OPERATIONS MANAGEMENT

- Operations as a source of competitive advantage
- Production strategies
- Logistic system Evolution.
- The Operations Management in service companies.

### SUBJECT II - CAPACITY AND PERFORMANCE MEASURES

- Capacity of a process
- Bottleneck.
- Capacity planning
- Changes in capacity over time
- Productivity.
- The concepts of utilization, effectiveness and efficiency of a productive system.

### SUBJECT III - DESIGN AND PROCESS PLANNING

- Layout
- Process planning
- Balanced production lines
- Process design with the use of simulators (Ape)

#### SUBJECT IV - THE PLANNING OF PRODUCTION

- Hierarchy of planning decisions.
- The planning process
- Aggregate planning
- The Master Production Plan (MPS).

#### SUBJECT V - THE PLANNING OF THE NEEDS OF MATERIALS

- The product definition (BOM)
- The Material Needs Planning (MRP I).
- The end capacity plan
- Complementary planning methods

#### SUBJECT VI - PRODUCTION PROGRAMMING

- Programming concepts (forward and backward)
- Programming of facilities focused on process
- Sequencing of works

#### SUBJECT VII - THE MANAGEMENT OF INVENTORIES WITH INDEPENDENT DEMAND

- ABC Analysis.
- Inventory management costs.
- EOQ model.
- The Point of Order (Q) system.
- The fixed period system (P).
- Other inventory management methodologies

#### SUBJECT VIII - LEAN MANUFACTURING

- Principles of LEAN
- JIT and Total Quality

### Methodology

To reach the indicated competences as naturally as possible, the theoretical sessions will combine the presentati  
All material will be made available to the students in the virtual campus.  
Specific hours of specific teaching are specified in practices that will be u

### Activities

Title	Hours	ECTS	Learning Outcomes
-------	-------	------	-------------------

Type: Directed

---

Lab practices	10	0.4	3, 7, 11
Presentation of casses	5	0.2	2
practical Classes	8	0.32	10
theoretical Classes	25	1	4, 8
Type: Supervised			
Tutorials	18	0.72	
Type: Autonomous			
Preparation of works	32	1.28	4, 6, 1, 10, 11
Realization of cases	14	0.56	7, 10
Study of given materials	35	1.4	10

## Assessment

General conditions:

The subject is evaluated with two components, the continuous evaluation  
The continuous evaluation contemplates group work according to the dis

Together they will have a weight of 60% of the final grade of the subject.

This part of the evaluation aims to facilitate the student's achievement of

an effort and commitment that must be known and recognized.

The works that comprise it will be evaluated by the teaching team and th

At the beginning of the course the teacher will detail and publish in the Moodle classroom contents and individua

Any student whose name appears in at least two installments will be considered "evaluable".

For a correct follow-up of the subject and its evaluation, the following nor  
Deliveries after the deadline, in formats different from those required or tl  
If in group work a student is considered not to have made the expecte

the rest of the classmates, which can be a zero if the rest of the classmates rate it.

Liberator Exam. At the request of the students of previous courses, a liberating examination has been established

examine these subjects in the final test.

The final test will be a final written test about concepts and aspects treated throughout the course. The students will

as well as exams from previous courses and their corrections in order to see the type of exercises that can be found

The exam will have theoretical and practical components always trying to assess the degree of understanding of

continuous evaluation, both the grade of the final test and the average of the continuous evaluation must be at least

If the final grade does not reach 5 points but exceeds 3.5, the student may perform a re-evaluation test in the corresponding

Schedule of evaluation activities The dates of the different evaluation tests (partial exams, exercises, delivery of

in advance during the semester. The date of the final exam of the subject is scheduled in the exam calendar of the

"The programming of the evaluation tests can not be modified, unless there is an exceptional and duly justified reason

in this case, the persons responsible for the qualifications, after consulting the teaching staff and to the affected :

the corresponding academic period.

" Section 1 of Article 115. Calendar of evaluation activities (Academic Regulations UAB)

The students of the Faculty of Economics and Business who, according to the p

by filling in the document Request reprogramming proof en[https://formularis.uab.cat/group/deganat\\_feie/solicitud](https://formularis.uab.cat/group/deganat_feie/solicitud)

Procedure for review of qualifications

Coinciding with the final exam will be announced the day and means of p

revision of the same will be informed according to the regulations of the University.

Recovery Process

"To participate in the recovery process the students must have been prev

of the total grade of the subject or module."

Section 3 of Article 112 ter. The recovery (UAB Academic Regulations).

The students must have obtained an average grade of the subject between 3.5 and 4.9.

The date of this test is scheduled in the exam calendar of the Faculty. Th

Otherwise, he will keep the same grade.

Irregularities in evaluation acts

Without prejudice to other disciplinary measures deemed appropriate, an

"in the event that the student makes any irregularity that could lead to a significant variation in the grade of an ev

This evaluation act, regardless of the disciplinary process that can be instructed In case of various irregularities o

the final grade of this subject will be 0 ".

Section 10 of Article 116. Results of the evaluation. (UAB Academic Regulations)

## Assessment Activities



Title	Weighting	Hours	ECTS	Learning Outcomes
Business work	30%	0	0	3, 4, 2, 1, 10, 11
Exam results	50%	3	0.12	6, 5, 7, 8, 10
Hats report	5%	0	0	3, 4, 5, 7, 1
MRP classwork	15%	0	0	4, 9, 1, 10

## Bibliography

- Videos and publications at aula Moodle
- Heizer, I. y Render, B.: Dirección de la Producción (Decisiones tácticas). Prentice-Hall.
- Heizer, I. y Render, B.: Dirección de la Producción (Decisiones estratégicas). Prentice-Hall.
- Heizer, I. and Render, B.: Operations Management. Prentice-Hall.