

Operations Management

Code: 102094
ECTS Credits: 6

Degree	Type	Year	Semester
2501231 Accounting and Finances	OB	3	2

Contact

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Use of Languages

Principal working language: spanish (spa)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: Yes

Other comments on languages

Supplemental English explanation, if required

Teachers

Xavier Armengol Nogues

Prerequisites

"The teaching methodology and evaluation proposed in the teaching guide may undergo some modification depending on the restrictions on attendance that the health authorities impose"

Objectives and Contextualisation

The subject considers the following teaching objectives:

- Introduce the student to the functional area of Operations, in its strategic and operational aspects, both for industrial and service companies.
- 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 seeking the optimization of material flows and showing its relationship with the Management and Commercial Control systems.
- That the student is able to evaluate for a company, strategic decisions (design of goods and services, design of productive capacity, development of projects), tactics (planning of the activity) and operational (allocation of resources, measurement of productivity and continuous improvement) in the field 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.
- Provide the student with those theoretical concepts and methodologies and techniques necessary to achieve all of the above.

Competences

- Analysing, summarising and assessing information.
- Communicating in oral and written form in Catalan, Spanish and English, in order to be able to summarise and present the carried out project in both forms.
- Demonstrating a comprehension of the principles, structure, organisation and inner workings of companies and organisations.
- Efficiently searching information, discriminating irrelevant information.
- Issuing technical-accounting reports related to the situation of a company.
- Students must be able to adapt to changing environments.

Learning Outcomes

1. Analysing and summarising situations and documents.
2. Analysing, summarising and assessing information.
3. Applying quantitative techniques in order to solve concrete problems.
4. Applying the acquired knowledge in order to solve problems and make decisions about practical issues.
5. Communicating in oral and written form in Catalan, Spanish and English, in order to be able to summarise and present the carried out project in both forms.
6. Efficiently searching information, discriminating irrelevant information.
7. Producing reports on the company's efficiency.
8. Specifying interventions in order to implement a process of change.
9. Students must be able to adapt to changing environments.
10. Use the necessary tools for analysis, both quantitative and qualitative, to solve problems and take decisions on different operational levels in the company.

Content

Topic I - INTRODUCTION TO OPERATIONS MANAGEMENT

- Operations as a source of competitive advantage Production strategies.
- Logistics system and its Evolution.
- The Directorate of Operations in service companies.
- Principles of the Lean Manufacturing Philosophy.

Topic II - CAPACITY AND PERFORMANCE MEASURES

- Capacity of a process.
- Bottleneck.
- Capacity planning.
- Capacity changes over time.
- Productivity.
- The concepts of use, effectiveness and efficiency of a production system.

Topic III - PROCESS DECISIONS

- Product Definition
- Types of production Layout.
- Work study.
- Process Operation Diagrams.
- Production lines.
- Balancing of production lines.

Topic IV - PRODUCTION PLANNING

- Hierarchy of planning decisions.
- The Aggregate Planning process.
- Methods to develop the Master Production Plan (MPS).

Topic V - THE PLANNING OF THE NEEDS OF MATERIALS

- Product definition and Bill of Materials (BOM).
- Material Requirements Planning (MRP).
- Releases of production and purchase orders.

UNIT VI - PROJECT PLANNING

- Definition and types of projects.
- Temporary planning of projects.
- Resource planning.
- Critical path and resource over-allocation.
- Project reports.

UNIT VII - PRODUCTION SCHEDULING

- Programming criteria.
- Heuristic Methods for Programming with several machines.
- Job Sequencing Process.
- Johnson's algorithm.

UNIT VIII - INVENTORY MANAGEMENT WITH INDEPENDENT DEMAND

- ABC analysis and rotations
- Inventory management costs.
- EOQ model.
- The Reorder Point (Q) system.
- The fixed period system (P).

Optional SAP practice

Students will have the option of doing a practice on the use of SAP S/4 HANA software on a voluntary basis.

The practice will have a maximum score of 0.5 points out of 10, which will be added to the mark obtained according to the calculation

detailed in the Evaluation activities section. In any case, it is an optional activity to raise a grade and that not doing it does not imply any penalty.

Naturally, whether the extra practice is done or not, the maximum final grade that can be obtained in the subject is 10.

Methodology

The planned teaching for the subject is classroom teaching.

The proposed teaching methodology may undergo some modification depending on the face-to-face restrictions imposed by the health authorities

Goals: To reach the indicated competences in the most natural way possible, the theoretical sessions will combine

with the resolution of practical exercises and seminars. All the material in the moodle will be made available to the

specific teaching in practices that will be devoted to the explanation of specific software for project planning.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theoretical Classes	24.5	0.98	6, 7, 5
laboratory practice	25	1	1, 2, 4, 3, 6, 8
Type: Supervised			
Tutorials	19	0.76	5

Type: Autonomous			
Fulfillment of casses	11.5	0.46	1, 9
Study the given materials	31	1.24	4, 10
preparation of works	31	1.24	2, 3, 6

Assessment

The proposed evaluation may experience some modification depending on the restrictions on attendance impose

General conditionsThe subject is evaluated with the components of: Continuous Assessment and Partial Exams.

- Hat Activity Report (Group) - 10%
- Classroom Quiz #1 - 10%
- Classroom Quiz #2 - 10%
- Planning a project, with Ms Project (group) - 20%

The Tests in the classroom will be individual and carried out at the end of the class, on a date previously indicate

The student must solve an exercise similar to those seen in class, in written form, in order to validate their unders

No computer will be used during the Tests. The graded evaluation of each of these tests will be accompanied by

To have the right to take the final exam, you must have a minimum score of 4 out of 10 in the Continuous Assess

That student who appears in ,
at least three deliveries with his name in the Continuous Assessment, will be considered "assessable".

First partial exam

It will deal with the first part of the course and the theoretical part will be included as a practical part of the subject

Second Partial Exam

It will deal with the second part (subjects after the partial exam) and the t

Its weight on the Qualification is 25%. The date of its realization will be the one indicated by the faculty for the final exam.
 Students have in moodle a collection of videos, theoretical material, solved exercises, etc.

Recovery

For those students who have obtained a grade that is equal to or greater

At the time of publishing the final qualifications, the modality of the same will be announced. This recovery will be

The student who attends and passes it will pass the subject with a grade of 5. Otherwise, he will maintain the gra

Repeating students

Students who do the subject again may take advantage of the option of not doing the continuous assessment un
Hats Report: If he/she got more than a 7, he/she gets a 5.

Planning with Ms Project Report: The same conditions as with the hats report, only in the event that he/she had a

Notice

For this reason, they are established without prejudice to other disciplinary measures that are deemed appropriate, and in accordance with current academic regulations, that irregularities committed by a student in carrying out any of the tests will be specifically qualified;

- If both plagiarism and group work is detected, both parties will be considered responsible and will imply suspending this evaluation activity with zero (0).
- If in the groupwork a student is considered to have not made the contributions expected to the group, he may receive a note that is different from that of the rest of the colleagues, which can be a zero if they qualify the rest of the components.
- Out-of-date deliveries, in formats other than those required or delivered by channels other than those established will not be accepted.

Assessment activities qualified in this way and by this procedure will not be recoverable nor will they have a specific review with all the effects that this decision entails.

Reschedule

The date of the final exam is scheduled in the assessment calendar of the Faculty.

"The dates of evaluation activities cannot be modified, unless there is an exceptional and duly justified reason why an evaluation activity cannot be carried out. In this case, the degree coordinator will contact both the teaching staff and the affected student, and a new date will be scheduled within the same academic period to ma

ke up for the missed evaluation activity." **Section 1 of Article 115. Calendar of evaluation activities (Academic Regulations UAB).** Students of the Faculty of Economics and Business, who in accordance with the previous paragraph need to change an evaluation activity date must process the request by filling out an Application for exams' reschedule

https://eformularis.uab.cat/group/deganat_feie/application-for-exams-reschedule

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Classroom test #1	10%	0.5	0.02	2, 4, 3, 6, 9, 10
Classroom test #2	10%	0.5	0.02	2, 4, 3, 6, 9, 10
First partial Exam (Midterm exam)	25%	2	0.08	2, 4, 3, 6, 9, 10
Hats report	10 %	1	0.04	1, 2, 4, 3, 6, 8, 7, 9, 5, 10
Project generation & planning	20%	2	0.08	1, 2, 4, 3, 6
Second Partial Exam	25%	2	0.08	2, 4, 3, 6, 9, 10

Bibliography

- Manuals del Ms Project disponibles al propi programari així com per Youtube.
- Chase, R.B., Aquilano, y N.J. Jacobs, F.R. (2005): Administración de la producción y operaciones, 10ª edición. McGraw-Hill.
- Companys, R. y Fonollosa, J.B. (1999): Nuevas técnicas de Gestión de stocks: MRP i JIT. 1ª edición. Marcombo.
- Gaither, N y Frazier, G. (2000): Administración de Producción y Operaciones. 4ª edición. Thomson Editores.
- Greasley, A. (2005): Operations Management. 1ª edición. John Wiley & sons
- Heizer, I. y Render, B. (2007): Dirección de la Producción (Decisiones tácticas). 8ª edición. Prentice-Hall.
- Heizer, I. y Render, B. (2007): Dirección de la Producción (Decisiones estratégicas). 8ª edición. Prentice-Hall.
- Heizer, I. and Render, B. (2006): Operations Management. 8ª edición. Prentice-Hall.
- Miranda Gonzalez, F.J. y otros. (2008): Manual de Dirección de Operaciones. 1ª edición. Thomson
- Slack, N, Chambers, S, y otros. (1998): Operations Management. 2ª edición Ed. Pitman Publishing
- Marc J Schnierderjans and Qing Cao. (2002) E-Commerce Operations Management. 1ª edición. World Scientific
- Schroeder, R. G. (2011): Administración de Operaciones. 5ª edición. McGraw-Hill
- Verge, X. y Martínez J.L.(1992): Estrategia y Sistemas de Producción de las Empresas Japonesas. 1ª

Software

Students carry out laboratory practices where they learn the operation of the MS project project planning program.