

Degree programme	Type	Course
Business and Information Technology	OB	3

Contact lecturer

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Prerequisites

none

Group languages

You can consult this information at the [end](#) of the document.

Objectives

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 specially 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.

Learning outcomes

- CM39 (Propose actions to improve indicators related to processes in an organisation.) Propose actions to improve indicators related to processes in an organisation.
- SM03 (Propose improvements in the area of operations in order to improve competitiveness.) Propose improvements in the area of operations in order to improve competitiveness.

Contents

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

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Tutorials	18	0.72	
practical Classes	10	0.4	
Study of given materials	34	1.36	
Lab practices	10	0.4	
Presentation of casses	5	0.2	
theorical Classes	24.5	0.98	
Realization of cases	14	0.56	
Preparation of works	31.5	1.26	

To reach the indicated competences as naturally as possible, the theoretical sessions will combine the presentation of theoretical concepts with the resolution of practical exercises.

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 used to explain specific software to solve operational problems.

In this subject, the use of Artificial Intelligence (AI) technologies is allowed and encouraged as an integral part of the development of the work, provided that the final result reflects a significant contribution by the student in the analysis and personal reflection. In assignments, unless explicitly stated otherwise, the student must identify which parts have been generated with this technology, specify the tools used and include a critical reflection on how these have influenced the process and the final result of the activity. The lack of transparency in the use of AI will be considered a lack of academic honesty and may lead to a penalty in the grade of the activity, or greater sanctions in serious cases. The use of AI is not allowed in exams.

AI POLICY.

"In this subject, the use of Artificial Intelligence (AI) technologies is allowed as an integral part of the development of the work, provided that the final result reflects a significant contribution of the student in personal analysis and reflection. The student should clearly identify which parts have been generated with this technology, specify the tools used, and include critical reflection on how these have influenced the process and the final outcome of the activity. The non-transparency of the use of AI will be considered academic dishonesty and can lead to a penalty in the grade of the activity, or greater sanctions in cases of severity." In any case, the use of AI is prohibited in any exam.

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.

Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Business work	25 %	0	0	CM39, SM03
Exam results	50%	3	0.12	CM39, SM03
Hats report	5%	0	0	CM39, SM03
MRP classwork	20 %	0	0	CM39, SM03

"This subject/module does not offer the option for comprehensive evaluation."

General conditions:

The subject is evaluated with two components, continuous evaluation and individual tests.

The continuous evaluation contemplates group work according to the distribution included in the summary table of the evaluation activities. Together they will have a weight of 50% of the final grade of the subject. Its main aim is to facilitate the student's achievement of knowledge and skills of the subject. This option requires both parties (teachers and students) an effort and commitment that must be known and recognized.

Each component will be evaluated by the teaching team and the students will receive a comment with their note on those aspects that should be improved.

At the beginning of the course the teacher will detail and publish in the Moodle classroom contents and individual weights of each one.

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 norms are also established:

- Deliveries after the deadline, in formats different from those required or through channels other than those stipulated, will be considered as non-delivered.
- If in group work a student is considered not to have made the expected contributions to the group, he/she can receive a differentiated score from the rest of the classmates, which can be a zero if the rest of the classmates so rate it.

The students must also sit two different individual tests:

The exam part (50% of the final grade for the subject) is divided into two tests: first part and second part (final).

The first part will be an exam of the syllabus that has been carried out to date. The note of this exam will be average with the one of the second part (final). The weight of that first partial will be 40%.

The final exam will be a final written test on concepts and aspects covered in the second part of the course both in class and in the papers presented, as in any type of extra material shared on the virtual campus.

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

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

The students have a set of solved exercises in the moodle, as well as exams from previous courses and their corrections in order to see the type of exercises that can be found in the exam.

The exam will have theoretical and practical components, always trying to assess the degree of understanding of the subject. To be able to average with the continuous evaluation, both the grade of the final test and the average of the continuous evaluation must be at least 3 points out of 10. If the final grade does not reach 5 points but exceeds 3.5, the student may perform a re-evaluation test in the conditions detailed below.

Schedule of evaluation activities The dates of the different evaluation activities (exercises, delivery of works,

etc.) will be announced well in advance during the semester. The date of both the intermediate and the final exam of the subject is scheduled in the exam calendar of the Faculty. \ "The programming of the evaluation tests can not be modified, unless there is an exceptional and duly justified reason why an evaluation act can not be carried out. In this case, the persons responsible for the qualifications, after consulting the teaching staff and the affected student, will propose a new date within 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 previous paragraph, need to change an evaluation date must present the request by filling in the document Request reprogramming proof https://eformularis.uab.cat/group/deganat_feie/solicitud-reprogramming-of-proofs

Procedure for review of qualifications

Coinciding with the final exam will be announced the day and means of publication of the final grades. Likewise, the procedure, place, date and time of the 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 previously evaluated in a set of activities that represent a minimum of two thirds 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. The student who presents himself and passes it will pass the subject with a grade of 5. Otherwise, he/she will keep the same grade.

Irregularities in evaluation acts

Without prejudice to other disciplinary measures deemed appropriate, and in accordance with current academic regulations, \ "in the event that the student makes any irregularity that could lead to a significant variation in the grade of an evaluation act, it will be graded with a 0.

This evaluation act, regardless of the disciplinary process that can be instructed In case of various irregularities occur in the evaluation acts of the same subject, the final grade of this subject will be 0 \ ". Section 10 of Article 116. Results of the evaluation. (UAB Academic Regulations).

The completion of assessment activities is subject to the provisions set out in this course guide and in the "[Policy of the School of Economics and Business on the Detection of Irregularities during Assessment Activities](#)", which regulates the conditions under which assessment tasks are conducted and the procedures applicable in cases where indications of irregularities are detected. Students are encouraged to consult the policy.

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.

Software

The students do some laboratory practices in excel where the more advanced get to program.

All the presentations can be done with any presentation programm.

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through

this [link](#). To access the information, you will need to enter the course CODE

Type of teaching	Group	Language	Semester	Shift
(TE) Theory	20	Catalan	first semester	morning-mixed
(PAUL) Classroom practices	201	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	201	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	202	Catalan	first semester	morning-mixed