



DEGREE CURRICULUM

OPERATIONS MANAGEMENT AND LOGISTICS

Coordination: ALONSO MARTINEZ, JOSE MANUEL

Academic year 2023-24

OPERATIONS MANAGEMENT AND LOGISTICS 2023-24

Subject's general information

Subject name	OPERATIONS MANAGEMENT AND LOGISTICS				
Code	101326				
Semester	2nd Q(SEMESTER) CONTINUED EVALUATION				
Typology	Degree	Course	Character	Modality	
	Bachelor's Degree in Business Administration and Management	3	COMPULSORY	Attendance-based	
	Double bachelor's degree: Degree in Business Administration and Management and Degree in Tourism	3	COMPULSORY	Attendance-based	
	Double bachelor's degree: Degree in Computer Engineering and Degree in Business Administration and Management	4	COMPULSORY	Attendance-based	
	Double bachelor's degree: Degree in Law and Degree in Business Administration and Management	4	COMPULSORY	Attendance-based	
Course number of credits (ECTS)	6				
Type of activity, credits, and groups	Activity type	PRAULA	TEORIA		
	Number of credits	2.4	3.6		
	Number of groups	3	3		
Coordination	ALONSO MARTINEZ, JOSE MANUEL				
Department	ECONOMICS AND BUSINESS				
Teaching load distribution between lectures and independent student work	40% classe presencial 60% treball autònom de l'estudiant				
Important information on data processing	Consult this link for more information.				
Language	Catalan				
Distribution of credits	Jose Manuel Alonso Martinez 14 New teacher 4				

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
ALONSO MARTINEZ, JOSE MANUEL	jose.alonso@udl.cat	14	
ESTARAN JUSTRIBO, CARLOS	carlos.estaran@udl.cat	4	

Subject's extra information

The course as part of the academic plan

This is one of the compulsory courses in the third year in which students will start learning about the operations and logistics area which is one of the most important functional areas of any company or organisation.

Learning objectives

See competences.

Competences

University of Lleida strategic competences

- Correctness in oral and written language.

Goals

- 6. Use the basic concepts and the specific vocabulary related to the operations properly.

- Master Information and Communication Technologies.

Degree-specific competences

- Apply instrumental techniques to the analysis and solution of business problems and to the taking of decisions.

Goals

- 4. Design, evaluate and improve the production systems of any organisation
- 5. Use different techniques to analyse and take strategic and operational decisions on the problems arising in the operations area

- Perform the roles related to the different functional areas of a business and institutions.

Goals

- 4. Design, evaluate and improve the production systems of any organisation
- 2. Explain the importance of the managing the logistics chain as a competitive advantage.
- Elaborate, interpret and audit the economical-financial information of entities and individuals, and provide them with assessment.

Degree-transversal competences

- Ability to criticise and be self-critical.
- Ability to organise and plan.
- Teamwork and leadership.
- Be able to work and to learn in an autonomous way and simultaneously adequately interact with others, through cooperation and collaboration.
- Ability to analyse and synthesise.

Goals

- 1. Analyse and/or define the strategic guidelines of operations management and the implications on the company's overall strategy and performance.
- Act in accordance with rigour, personal compromise and in a quality orientated way.

Subject contents

Subject contents

BLOCK I

1. OperationsStrategy.
 - 1.1. Contextin which the operations strategy is implemented.
 - 1.2. *Competitive priorities*.
 - 1.3. Positioningstrategies in operations.
 - 1.4. Operationsmanagement as a competitive advantage.
2. Processdesign.
 - 2.1. Introduction:Type of process. Make-to-stock-project-order-production.
 - 2.2. Fundamentelements in the design process.
 - 2.3. Processanalysis techniques.
 - 2.4. Pushand pull systems.
 - 2.5. Leanmanufacturing systems.
 - 2.6. Just-in-timephilosophy (JIT).
 - 2.7. Productionsystem indicators. Productivity.

BLOCK II

3. Capacitymanagement
 - 3.1. Definitionof capacity.
 - 3.2. Capacityplanning and control: *Bottleneck management*.
 - 3.3. Capacitydecision making methodology.
 - 3.4. Capacityplanning tools and techniques.
4. Trackingand tracing strategies
 - 4.1. Decisionson tracking and tracing: Significant trends.
 - 4.2. Factorsthat affect the decisions made on tracking and tracing.
 - 4.3. Trackingand tracing of a plant.
 - 4.4. Trackingand tracing within a network of plants.
5. Plantdistribution strategies: Layout.
 - 5.1. Introductionto planning the layout.
 - 5.2. Basicplant distribution formats.
 - 5.3. Plantdistribution per product.
 - 5.4. Plantdistribution per process.

BLOCK III

6. Planningproduction
 - 6.1. Description of the operations planningactivities: long, medium and short-term.
 - 6.2. *Aggregate production planning*:strategies.
 - 6.3. Master production plan.

BLOCK IV

7. Introduction to logistics
 - 7.1. How logistics fit in with the company's Operations Management.
 - 7.2. *Supply chain management (SCM).*
 - 7.3. Purchasing and supplies.
 - 7.4. Storage and handling.
 - 7.5. Picking, packing / preparing orders.
 - 7.6. Transportation and distribution.
8. Stock control
 - 8.1. Concept and role of the inventory and stocks in the company.
 - 8.2. Type of inventories.
 - 8.3. *Inventory costs.*
 - 8.4. *Dependent vs. Independent demand.*
 - 8.5. Basic inventory models in independent demand: *fixed order quantity systems and fixed order period systems.*
9. *Material management: MRP I.*
 - 9.1. Dependant demand inventory systems.
 - 9.2. Planning material needs: MRP I.
 - 9.3. Planning *production resources*: MRP II.

BLOCK V

10. Innovation and technology management.
 - 10.1. Innovation vs. technology.
 - 10.2. Characteristics of companies that are constantly successful.
 - 10.3. Designing new products.
 - 10.4. Manufacturing technology.
 - 10.5. Managing technological change.
 - 10.6. Innovation management.
11. Quality management.
 - 11.1. Evolution of Quality management.
 - 11.2. Contributions of Juran, Deming and Ishikawa to quality management.
 - 11.3. ISO 9001:2008 quality management standard.
 - 11.4. *The EFQM Excellence Model for Self-Employed Entrepreneurs.*
12. Total Product Maintenance (TPM)
 - 12.1. Introduction. Principles and importance of TPM.
 - 12.2. Types of maintenance.
 - 12.3. Implementing the TPM.
 - 12.4. Benefits of the TPM.

OPERATIONS MANAGEMENT AND LOGISTICS 2023-24

The teaching of this subject includes large group classes, mainly lectures; medium group classes, basically practical classes; and independent student work. This work may be individual or group depending on the proposed activities.

Basic notes will be given at the beginning of each topic block. These notes will need to be supplemented with bibliography, mainly the one proposed in this teaching guide.

In addition to theoretical notes, practical exercises will be given. Some exercises will be solved by the teacher and others you will work on and solve in order to assimilate the concepts explained in class.

Communication with the student will be through the Sakai UdL Virtual Space. In this space you will find all the material of the subject such as notes, statements of the exercises, some solutions, notes, etc., as well as notices and other messages from the teachers.

Class attendance is important and some of the assessable tests will be done without notice.

Development plan

Dates (Weeks)	Description:	Activity Attended	HTP (2) (Hours)	Independent work activity	HTNP (3) (Hours)
Week 1 -4	Presentation of the subject. BLOCK I Unit 1: Operations strategy. Unit 2: Process design	Presentation of the subject. Lecture, discussion of cases and problems.	14	Understanding the notes Resolution of cases Exercise resolution	18
Week 5 - 8	BLOCK II Unit 3: Capacity management. Unit 4: Location. Unit 5: Plant distribution PT 1. Written test of theory of subjects 1 to 5	Master lesson Problem solving Case study	14	Reading and understanding and study of the notes Resolution of capacity exercises Resolution of localization exercises Resolution of layout exercises	18
Week 9	PP 1. Written test practice of subjects 1 to 5	Individual written exam	2	Prepare exam	9
Week 10-11	BLOCK III Unit 6: Production planning	Master lesson Problem solving Case study	7	Lectura i comprensió i estudi dels apunts Resolució d'exercicis de planificació de la producció	10
Week 11-15	BLOCK IV Unit 7: Stock management. Unit 8: Materials management: MRP I Unit 9: Supply Chain Management PT 2. Written test of theory of subjects 6 to 9	Master lesson Problem solving Case study (videos and lecture) Computer classroom practice	21	Lectura i comprensió i estudi dels apunts Resolució d'exercicis Estudi de casos	26
Week 16-19	PP 2. Written test practice of subjects 6 to 9	Individual written exam	2	Prepare exam	9

(2)HTP = Hours of On-site Work

(3)HTNP = Hours of Non-Presential Work

Evaluation

Evaluation Activities	Criteria	%	Data	M/V (1)	I/G (2)	Observations
PT 1 (Theory test 1)	Theory questions from topics 1 to 5 all in short question format and/or test type with multiple answers	22,5%	Week 8	M	I	If the student does not show up, he will get the grade of NOT PRESENTED, although it will be recorded as zero for the average.
PTP 2 (Theory test 2)	Theory questions from topics 6 to 9 all in short question format and/or test type with multiple answers	22,5%	Week 15	M	I	If the student does not show up, he will get the grade of NOT PRESENTED, although it will be recorded as zero for the average.
PP 1 (practice test 1)	Practical exercises from topics 1 to 5	27.5%	Week 9	M	I	If the student does not show up, he will get the grade of NOT PRESENTED, although it will be recorded as zero for the average.
PP 2 (practice test 2)	Practical exercises from topics 6 to 9	27.5%	Week 16-19	M	I	If the student does not show up, he will get the grade of NOT PRESENTED, although it will be recorded as zero for the average.

(1) Mandatory / Voluntary

(2) Individual / Group

Clarifications

The subject of Operations Management and Logistics will be assessed through continuous assessment.

The continuous assessment consists of the student obtaining grades for the following types of activities: 4 written tests, two with theoretical questions and two with practical exercises.

Therefore, to pass this subject you must keep in mind:

- Completion of 2 written tests that will evaluate the theoretical content of the program. The first PT1 test will be for subjects 1, 2, 3, 4, 5. The second PT2 test will be for subjects 6, 7, 8, 9. The theoretical tests will have a weight of 22.5% each in the final grade. The date of these tests will be held during class hours, preferably in the week before the scheduled exam weeks.
- The completion of 2 written tests that will evaluate the practical content of the program. The first test PP1 will be for subjects 1, 2, 3, 4, 5. The second test PP2 will be for subjects 6, 7, 8, 9. Each written test will have a weight of 27.5% in the final grade. The dates of these tests appear in the academic calendar established by the FDET during the exam weeks.
- The delivery or performance in class of exercises, cases and proposed summaries will be taken into consideration by the teachers in the final grade.

Important Notice

- The student who does not appear in any of the four tests will have the grade of zero for that activity not presented.
- The student who has a qualification in 2 or more assessment activities will have the weighted average as his final grade for this subject.
- The student who only obtains a grade in one of the assessable tests or has not taken any other test, will obtain the grade of NOT PRESENTED as the final grade for this subject.
- There is no final exam for the subject. Only for those who have requested a unique assessment.

Other aspects to bear in mind when taking the written tests:

- Only the pen, the calculator and the academic program may be taken to the written tests.
- Neither mobile phones nor notes or any material with the contents of the program can be brought.
- Everyone must have their calculator and program on the days of the written tests, and they cannot be exchanged or left.
- According to art. 3.1 of the UdL assessment regulations, the student may not, under any circumstances, use unauthorized means or fraudulent mechanisms during the assessment tests. The student who uses any fraudulent means related to the test and/or brings unauthorized electronic devices, must leave the exam or the test, and will be subject to the consequences provided for in these regulations or in any other internal regulations of the UdL.

Final grade of the subject

To calculate the FINAL grade, the weighted average will be made over all four tests, according to the established percentages (see the table in this section). To pass the subject you must:

1-Obtain as a weighted average of all the tests a grade equal to or higher than 5 out of 10. In the case of not meeting these requirements, the final grade would be SUSPENSION.

2-Obtain as a weighted average of the two theory tests a grade equal to or higher than 4 out of 10. In the case of not meeting these requirements, the final grade would be SUSPENSION.

3-Obtain as a weighted average of the two practice tests a grade equal to or higher than 4 out of 10. In the case of not meeting these requirements, the final grade would be SUSPENSION.

4-Students who obtain as a weighted average of all the tests a grade equal to or higher than 5 out of 10 but who do not reach 4 of the weighted average in the two theory tests or in the two practice tests, will have the right to recovery of ALL the theory or ALL the practice, so that they can meet the established requirements.

5-Get more than 2.5 in the 4 written tests. It is therefore mandatory to appear in all tests. Students who obtain as a weighted average of all the tests a grade equal to or higher than 5 out of 10 but who do not reach 2.5 in any of the tests, will have the right to retake ALL the theory or ALL the practice, in the part in which they have less than 2.5 so that they can comply with the established requirements.

Alternative assessment

In the event that a student documents his/her inability to attend the activities scheduled within the continuous assessment (due to paid work, second or subsequent enrollment in the subject...) he/she may opt for a single validation test skills and knowledge that will be carried out on the day and at the time established in the Degree assessment calendar for the final test of the ordinary assessment. This test will consist of solving practical exercises and short and/or test-type questions.

The request for this evaluation modality must be made before the first month after the start of the semester with documentary accreditation and, once made, it cannot be modified.

On the Faculty's website there is the document that students must fill out and hand in to the teacher responsible for the subject <http://www.fdet.udl.cat/export/sites/Fdet/ca/.galleries/Documents/Secretaria-documents/Sollicitud-davaluacio-alternativa.pdf>

This test is subject to the assessment regulations for the purposes of recovery (tests higher than 30%) and review.

Bibliography

Adam, Everett E. Jr. ; Ebert, Ronald J. (1991): **Administración de la producción y las operaciones**. Prentice Hall.

Chase, Richard B; Jacobs, F.Robert; Aquilano, Nicholas J.; (2009): **Administración de Operaciones. Producción y cadena de suministros**. McGraw Hill. 12ª Edición.

Chase, Richard B. i Aquilano, Nicholas J. (1994): **Dirección y Administración de la Producción y de las Operaciones**. Addison-Wesley Iberoamericana,

CIDEM y ESADE (2003): **Producció i Logística. Guies de Gestió de la innovació. Generalitat de Catalunya. Departament de Treball, Indústria, Comerç i Turisme**. CIDEM.

Chopra, S. y Meindl, P. (2008): **Administración de la cadena de suministro. Estrategia, planeación y operación**. Pearson Prentice Hall. 3ª Edición.

Coll Solà, Joan (1999). **Organització Industrial**. Edicions UPC.

Claver, Enrique; Molina, José F.; Tarí, Juan José (2011): **Gestión de la calidad y gestión medioambiental**. Pirámide. 3ª Ed.

Davis, Mark M.; Aquilano, Nicholas J.; Richard B. Chase (2001): **Fundamentos de Dirección de Operaciones**. McGraw Hill. 3ª Ed.

Domínguez Machuca, José Antonio et al. (1995): **Dirección de Operaciones Vol. I: Aspectos estratégicos**. McGraw Hill

Domínguez Machuca, José Antonio et al. (1995): **Dirección de Operaciones Vol. II: Aspectos tácticos**. McGraw Hill.

Eppen, G.D. et al. (2000): **Investigación de Operaciones en la Ciencia Administrativa**. Prentice Hall.

Escorsa, Pere; Valls, Jaume (1996): **Tecnología i innovació a l'empresa. Direcció i gestió**. Edicions UPC.

Fernandez, Esteban; Avella, Lucía; Fernández, Marta (2003): **Estrategia de producción**. McGraw Hill.

Gaither Norman i Frazier Greg. (2000): **Administración de producción y operaciones**. International Thomson Editores

Heizer, Jay i Render, Barry (2007): **Dirección de la producción y de operaciones. Decisiones tácticas**. Pearson Prentice Hall. 8ª edición.

Heizer, Jay i Render, Barry (2007): **Dirección de la producción y de operaciones. Decisiones estratégicas**. Pearson Prentice Hall. 8ª edición.

Johnson, P. Fraser, Leenders, Michiel R. i Flynn Anna E. (2012): **Administración de**

compras y abastecimientos. McGraw Hill. 14ª edición.

Krajewski, Lee J. i Ritzman, Larry P. (1993): **Operations Management: Strategy and Analysis**. Addison-Wesley. (En español: Administración de operaciones Estrategia y análisis. Pearson Education. 2000 /5ª ed. México)

Ruiz Jiménez, A.; Alfalfa Luque, R.; Medina López, C. y Chávez Miranda, E. (2002): **La estrategia de operaciones en organizaciones de servicios**. Esic Market. Vol. 112, 2º cuatrimestre, mayo-agosto.

Velasco Sánchez, J. (2010): **Organización de la Producción. Distribuciones en planta y mejora de los métodos y los tiempos**. Pirámide. 2ª Edición.