



Universitat de Lleida

## DEGREE CURRICULUM

# **PRODUCTION MANAGEMENT**

Coordination: PAGÈS BERNAUS, ADELA

Academic year 2019-20

## Subject's general information

Subject name	PRODUCTION MANAGEMENT			
Code	102499			
Semester	2nd Q(SEMESTER) CONTINUED EVALUATION			
Typology	Degree	Course	Character	Modality
	Not informed	2	COMPULSORY	Attendance-based
	Bachelor's degree in Industrial Organization and Logistics Engineering	2	COMPULSORY	Attendance-based
Course number of credits (ECTS)	6			
Type of activity, credits, and groups	Activity type	PRAULA		TEORIA
	Number of credits	3		3
	Number of groups	2		2
Coordination	PAGÈS BERNAUS, ADELA			
Department	BUSINESS ADMINISTRATION			
Teaching load distribution between lectures and independent student work	60 hrs. presential and 90hrs independent work			
Important information on data processing	Consult <a href="#">this link</a> for more information.			
Language	Catalan, Spanish			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
PAGÈS BERNAUS, ADELA	adela.pages@udl.cat	12	

## Subject's extra information

This course requires continuous work throughout the semester to achieve the objectives. Critical thinking and capacity for abstraction is required.

You can find educational materials in the Virtual Campus: <http://cv.udl.cat>

- Schemes notes
- Collection of statements of exercises
- Articles and publications
- Materials and additional resources necessary to properly develop learning

We recommend visiting frequently the Virtual Campus space associated with the course. Announcements of relevant information and publication of notices will be published in this site.

## Learning objectives

The main learning objectives are:

- Provide knowledge regarding the Production and Operations Management in companies producers of goods and/or services
- Analyze different concepts and terminologies that require various quantitative or qualitative analysis.
- Define different models, scenarios and techniques that are common in the subsystem of the management of the production enterprises

## Competences

### Basic

B02 That students know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.

B03 That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.

B04 That students can transmit information, ideas, problems and solutions to a specialized and non-specialized public.

B05 That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

### Transversal

CT1. To develop a proper understanding and oral and written expression of Catalan and Spanish.

CT4. To apply basic knowledge of entrepreneurship and professional environments.

## General competences

CG4. To solve problems with initiative, make decisions, creativity, critical reasoning and to communicate and transmit knowledge, skills and abilities in the field of Industrial Organization Engineering.

CG9. To organize and plan in the field of the company, and other institutions and organizations.

CG10. To work in a multilingual and multidisciplinary environment.

## Specific competences

CE15. To apply the basic knowledge of production and manufacturing systems.

CE19. To have applied knowledge of basics and principles of quality management and technological innovation.

CE29. To acquire capacity to design and optimize the logistics and transportation.

CE30. To acquire capacity to supply chain management.

CE31. To acquire capacity for production planning and control, maintenance program implementation and perform statistical process control.

## Subject contents

### 1. Production and Company

- 1.1 A company as a system
- 1.2 Subsystems
- 1.3 Business strategy
- 1.4 Production system
- 1.5 Organization of production
- 1.6 Product, productivity and process
- 1.7 Operations Strategy
- 1.8 Planning, control production subsystem
- 1.9 Contributions to the organization of production

### 2. Programming and project management

- 2.1 Programming methods (PERT, GANTT)
- 2.2 Time-Cost methods and Project Crashing
- 2.3 Information systems for project management

### 3. Capacity and Performance measures

- 3.1 Long-term capacity
- 3.2 Capacity management
- 3.3 Capacity Assessment Techniques: NPV, break-even analysis and decision trees

### 4. Method study

- 4.1 Types of processes
- 4.2 Process diagrams
- 4.3 Process performance
- 4.4 Process improvement

### 5. Work measurement

- 5.1 Work measurement techniques
- 5.2 Time study
- 5.3 Sampling

### 6. Processes and plant layout

- 6.1 Types of processes
- 6.2 Techniques for solving plant layout problems
- 6.3 Balancing production and assembly lines

### 7. Quality Management tools

- 7.1 Historical evolution of quality management

- 7.2 The ISO 9001 norm and the EFQM
- 7.3 Costs of quality and non-quality
- 7.4 Quality Control
- 7.5 Statistical Process Control
- 7.6 Ishikawa tools
- 7.7 Control charts
- 7.8 Acceptance Sampling
- 7.9 Continuous improvement (kaizen)

## Methodology

The course will be taught with a combination of master classes and practical activities which will involve lectures and case study analysis.

The usual format of the sessions will consist of a first part of explanation of the main concepts, and then a practical classroom-guided activity that will allow students to internalize and consolidate the concepts discussed in the session.

The time distribution of dedications will be:

Activity	Classroom activity		Homework activity		Total time
	Goals	Hours	Student work	Hours	Hours/ECTS
Master class	Explanation of concepts	30	Comprehension	45	75
Problems and case studies	Case study, problems	30	Problem solving	45	75
Totals		60		90	150

## Development plan

Week	Description	Classroom activity	PWH	Homework activity	NPWH
S1	Presentation. Lesson 1	Presentation of the subject Master class	4	Comprehension	6
S2	Lesson 1	Master class. Problems setup	4	Comprehension and problem solving	6
S3	Lesson 2	Master class. Problems setup	4	Comprehension and problem solving	6
S4	Lesson 2	Master class. Problems setup	4	Comprehension and problem solving	6
S5	Lesson 3	Master class. Problems setup	4	Comprehension and problem solving	6
S6	Lesson 3	Master class. Problems setup	4	Comprehension and problem solving	6
S7	Lesson 4	Master class. Problems setup	4	Comprehension and problem solving	6
S8	Lesson 4	Master class. Problems setup	4	Comprehension and problem solving	6
S9	First term test	Individual written test	2	Test preparation	3

<b>S10</b>	Lesson 5	Master class. Problems setup	4	Comprehension and problem solving	6
<b>S11</b>	Lesson 5	Master class. Problems setup	4	Comprehension and problem solving	6
<b>S12</b>	Lesson 6	Master class. Problems setup	4	Comprehension and problem solving	6
<b>S13</b>	Lesson 6	Master class. Problems setup	4	Comprehension and problem solving	6
<b>S14</b>	Lesson 7	Master class. Problems setup	4	Comprehension and problem solving	6
<b>S15</b>	Lesson 7	Master class. Problems setup	4	Comprehension and problem solving	6
<b>S16</b>	Second term test	Individual written test	2	Test preparation	3

PWH: Presential Working Hours

NPWH: Non-presential Working Hours

Each lesson contains an activity that will be part of the assessment of the course.

## Evaluation

The final mark of the course is composed of the following elements and weights:

- First term exam: 35%
- Second term exam: 35%
- Practical activities and classwork : 30%

Score ranges from 0 to 10 points. A minimum score of 4 points in each exam is required in order to qualify for the course.

The activities must be submitted through the Campus Virtual site within the period given. The activities' mark will assess both presentation, the correct application of the techniques and the results interpretation.

## Bibliography

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