

Academic Year/course: 2020/21

## 30622 - Production Management

### Syllabus Information

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**Academic Year:** 2020/21

**Subject:** 30622 - Production Management

**Faculty / School:** 109 - Facultad de Economía y Empresa

**Degree:** 432 - Joint Law - Business Administration and Management Programme

**ECTS:** 6.0

**Year:** 5

**Semester:** First semester

**Subject Type:** Compulsory

**Module:** ---

## 1. General information

### 1.1. Aims of the course

This course provides students with concepts, techniques and tools to design, analyze, and improve core operational capabilities, and apply them to a broad range of application domains and industries always considering the agenda 2030 for the Sustainable Objectives for Development (<https://www.un.org/sustainabledevelopment/es/>), looking for their consecution through the following specific aims:

*Objective 4, aims 4.3, 4.4, 4.5 y 4.7*

*Objective 8, aims 8.6*

*Objective 9, aims 9.2*

*Objective 12, aims 12.6*

*Objective 17, aims 17.10*

### 1.2. Context and importance of this course in the degree

Once the student has followed the basic subjects to get a global vision about the economy, firms and organizations, Operations Management will provide students with basic skills and knowledge to manage operations decisions, to put them in context with the strategy of each firm, and to make the operations department a source of competitive advantage for firms.

### 1.3. Recommendations to take this course

Class assistance is highly recommended, as well as participation on the activities and assignments handed-out in class.

It is considered that all students on Operations Management properly manage production concepts taught in the subject "Basics of Business Administration and Management".

## 2. Learning goals

### 2.1. Competences

Specific skills:

1. To manage, organize and administrate firms and organizations
2. To know the functioning of Operations Management area and to be able to solve management questions related to it.
1. To prepare advice reports about specific situations related with production decisions in markets, industries, organizations and firms.
2. To understand and to be able to apply professional knowledge and scientific methodologies in solving economic or business related problems.

Cross skills:

1. Problem solving

2. Organization and planning
3. Look for information from different sources and correctly analyze it
4. Decision making
5. Motivation to quality and excellence
6. Capacity to adapt to new situations

Capacity to apply theory to practice

## 2.2. Learning goals

- To know, understand and manage theoretical concepts related to Operations Management: definitions, available options for decision making, techniques and models for problem solving.
- To solve problems related with every fundamental aspect linked with the management, organization and administration of functional production decisions.
- To prepare reasoned reports about complex situations involving production departments on real or simulated firms.

## 2.3. Importance of learning goals

This course will introduce concepts and techniques for design, planning and control of manufacturing and service operations. The course provides basic definitions of operations management terms, tools and techniques for analyzing operations, and strategic context for making operational decisions. It improves their core operational capabilities, and let the students to apply them to a broad range of jobs in the operations field. It is considered that this knowledge is fundamental to get any job related to operations field that implies certain responsibility.

## 3. Assessment (1st and 2nd call)

### 3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

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The student has to show the acquisition of the learning objectives through a continuous or a global assessment. For the first call, the student has the opportunity to follow a continuous assessment that comprises the following assignments.

1. **Active learning and participation** on theoretical sessions. This participation will consist on answering, individually, the questions about the theoretical contents indicated by the lecturer. Specifically, there will be a set of 10-15 multiple choice questions at the beginning of each new unit, about the main concepts of the previous unit. For the last unit, the activity will be held during the last session before the exams. Estimated time for this activity is 10-15 minutes. The students will get from 0 to 0.5 points for each of these activities (0.5 is the maximum score and punctuation varies according with the awareness shown with the answers). These activities will be worth 40% of the final mark.
2. **Midterm assignment.** In this assignment the student has to show its knowledge about the practical part of the subject. At the beginning of the semester the instructor will indicate if this knowledge will be shown through a practical exam or through the elaboration of a global report about a real firm. Anyway, this assignment will be individual and will include at least one practical question about each of the first four units. This assignment will be worth 30% of the final mark.
3. **Final assignment.** In this assignment the student has to show its knowledge about the practical part of the subject. This assignment will follow the same structure than the midterm one and will include at least one practical question about each of the last four units. This assignment will be worth 30% of the final mark.

Students following the continuous assessment need at least a 5 out of 10 on the average mark for the participation activities and a 5 out of 10 on the average mark of the midterm and final assignments. Otherwise, or if the student is looking for a higher mark, they will have the opportunity to make the corresponding part of the first call global exam. If this is the case, the final mark will be the highest one.

Global assessment will comprise a final theoretical exam and a final practical exam. On the examination date proposed by

the University for each faculty, the student will make a written exam (on first or second call) consisting of theoretical multiple choice questions (40%) and another with problems to solve and short case studies resolution (60%). Each exam requires a 5 out of 10 to pass the subject. If it is not the case, students will get the lowest mark as the final one. Students on second call have to do both exams even if they had passed one on the first call.

All these assignments and activities are expected to be face to face, but if sanitary circumstances force to it, they might be done online or under a mixed system. It is important to highlight that if there is one part of the assessment that is not face to face, the student can be recorded. Students can execute their rights following the procedure explained on this link:

[https://protecciondatos.unizar.es/sites/protecciondatos.unizar.es/files/users/lopd/gdocencia\\_reducida.pdf](https://protecciondatos.unizar.es/sites/protecciondatos.unizar.es/files/users/lopd/gdocencia_reducida.pdf)

*Moreover, the University can use any necessary software to verify the authorship and originality of the student's assignments and exams. Any plagiarism or suspicious copy detected at any activity done along the semester, will imply a zero on it.*

## 4. Methodology, learning tasks, syllabus and resources

### 4.1. Methodological overview

The selection of the assignments that students will work in the Operations Management course pretends to be varied enough to help them to develop the specific skills required to pass the course.

### 4.2. Learning tasks

This course is organized as follows:

**Lectures** (30 hours). Two weekly sessions in which theoretical concepts of the course will be explained, they will be put into context using real situations and real firms, and participation and feedback will be encouraged with the use of multiple-choice questions that will be valued on the final mark.

**Practice sessions** (30 hours). Two weekly sessions to put into practice the theoretical concepts and to help students develop their skills solving practical exercises and case studies or searching for information and elaborating the global report.

**Practice sessions - P6.** If P6 hours are available (\*), they will be used for the teacher in order to review the global report or any other difficult parts of the subject.

**Autonomous work and study** (90 hours). Students work focused on the following activities: critical thinking, concepts study, problem based learning, homework, management report and tutorials.

All these assignments and activities are expected to be face to face, but if sanitary circumstances force to it, they might be done online or under a mixed system.

### 4.3. Syllabus

#### Topic 1: Introduction to Operations Management

- 1.1. Operations Management
- 1.2. The heritage of Operations Management
- 1.3. Operations for services
- 1.4. The challenge of productivity

#### Topic 2: Process Design

- 2.1. Process strategies
- 2.2. Process analysis and design
- 2.3. Just in time

#### Topic 3: Capacity Planning

- 3.1. Capacity concept
- 3.2. Capacity decisions
- 3.3. Break-even analysis
- 3.4. Applying decision trees to capacity decisions

#### Topic 4: Location Decisions

- 4.1. The strategic importance of location

- 4.2. Factors that affect location decisions
- 4.3. Methods of evaluating location alternatives
- 4.4. Service location strategy

#### **Topic 5: Quality Management**

- 5.1. Quality and strategy
- 5.2. Quality definition, perspectives and costs
- 5.3. International quality standards
- 5.4. Total quality management
- 5.5. The role of inspection
- 5.6. TQM in services
- 5.7. Quality Function Deployment
- 5.8. JIT Quality

#### **Topic 6: Managing Inventory**

- 6.1. The importance of Inventory and its management
- 6.2. Inventory models for independent demand
- 6.3. Probabilistic Models

#### **Topic 7: Managing Projects**

- 7.1. The importance of project management
- 7.2. PERT
- 7.3. CPM

#### **Topic 8: Supply Chain Management**

- 8.1. The supply chain's strategic importance
- 8.2. Global aspects of Supply Chains
- 8.3. Economy and strategy of Supply Chains
- 8.4. Supplier selection. Kraljic Matrix.

### **4.4. Course planning and calendar**

Learning and assessment activities

<b>Distribution</b>	<b>ECTS</b>	
In-class activities		2.4
Lectures	2 hours per week	1.2
Practical sessions	2 hours per week P2	1.2
Outside activities		3.6

Final report	14 hours	0.56
Final exam	2 hours	0.08

Autonomous work including test preparation

74 hours

2.96

The assignments and deadlines will be announced at the beginning of the second semester using Moodle or the reprography service. Final examination dates are already published at Faculty's web page.

#### **4.5. Bibliography and recommended resources**