

PRODUCTION AND OPERATIONS MANAGEMENT

COURSE DETAILS

| | |
|------------------|----------------------------------|
| Code | 36289 |
| Degree | Degree in Business Management |
| Mention | Business creation and management |
| Character | Optional |
| Year | 4th |
| ECTS | 4.5 |

PROFESSORS

| Name | Departament | Tutorials |
|-------------------|---------------------|--------------------------|
| Roca Pérez, Lluís | Business Management | Tuesday (by appointment) |

SUMMARY

The subject "Production and Operations Management" is part of the core of the companies because it is necessary to assure customer service at the right time, with adequate quality and a defined cost. This is why the subject implements the concepts studied in "Cost Accounting", "Measurement and information systems in the company" and "Quality and operational excellence".

This subject aims to help understanding how Production Management works and its interrelations with the rest of the subsystems of any organization. The contents of the course part from the strategic level, so special emphasis is placed on strategic decisions such as product development, production process design, technology, production planning and location of facilities, among others.

The entire operations management is reviewed following the chronology of the services/products in the entire supply chain. It begins with the planning in its broadest sense, purchase management, procurement, production programming, inventory management and, finally, project management in the operations area.

The circle of the course is closed with a practical application through a real case of reorganization of operations to be done by the students themselves.

PRIOR KNOWLEDGE

Restriction of registration

Quality Management and Cost Accounting.

Other requirements

None.

COMPETENCES

GENERAL COMPETENCES:

- CB4 – To be able to transmit information, ideas, problems and solutions to a specialized and non-specialized audience
- GI.1 – Analysis and synthesis capability
- GI.2 – Organization and planning capability.
- GI.7 – Problem solving capability.
- GI.8 – Decision making capability.
- GI.9 – Ability to negotiate and reconcile interests effectively.
- GP.1 – Team working capability.
- GP.2 – Skills in personal relationships.
- GP.3 – Critical and self-critical capability.
- GP.4. – Commitment to ethics and social responsibility.
- GS.3 – Creativity.
- GS.7 – Ability to positively contribute to raise awareness of environmental and social issues, and to overcome all forms of discrimination, essential for economic development and poverty reduction.

SPECIFIC COMPETENCES:

- EA.12 - Know how to identify, measure and value business costs in order to design and implement cost-allocation models and methods.
- EA.16 - Ability to implement and introduce continuous improvement procedures in all areas of the organization.
- EA.30 - Capacity to plan, organize, control and evaluate the implementation of business strategies.
- EA.41 - To know the characteristics of the different production systems or to provide services and to know how to manage them under criteria of efficiency and efficacy in close interrelation with the other areas of the company and with its environment.

LEARNING OUTCOMES

Upon completion of this course, students will be able to:

- Understand the impact of operations.
- Capacity to plan, organize, control and evaluate the implementation of operations.
- To know how to design and implement the most suitable operations strategy for the company.
- Ability to systematically define, resolve, and expose complex problems.
- Ability to implement and introduce continuous improvement procedures in all areas of operations.
- Ability to establish a system of operational management indicators.
- To know how to raise objectives and strategies at different levels of the organization as well as to assess the implications and needs for their achievement.
- Recognize the key factors of operational competitiveness and the sustainability of economic activities.
- To know the characteristics of the different production systems or the provision of services and to know how to manage them under criteria of efficiency and efficacy in close interrelation with the other areas of the company and with its environment.
- To know the alternatives of productive systems, and to know how to assess location and design decisions of plant and warehouses.
- To know how to plan, organize and control the productive or service activity.
- To manage productive or service delivery systems under criteria of efficiency and efficacy, in close interrelation with the other areas of the company.
- Increased logical/strategic reasoning to address real situations in the business world.
- Ability to design decision-making rules in production planning and business logistics.
- Apply information for business decision making.
- Ability to solve models using computer applications.
- To make a scorecard with the most important management indicators.

COURSE CONTENTS

- 1. History and trends in the world of operations**
- 2. Introduction to Production and Operations Management from a strategic point of view**
 - a. Importance of the operations, its organization and objectives
 - b. Supply chain model
- 3. Operations Key Performance Indicators**
 - a. Management of operating indicators
 - b. Operations control panel
- 4. Purchasing Management**
 - a. Provider selection

- b. Day-to-day provider management

5. Operations Planning and Programming

- a. Types of short, medium and long-term planning
- b. Analysis of provider and plant capacity
- c. MRP Provisioning
- d. Supply just-in-time

6. Inventory Management

- a. Providing types
- b. Storage systems

7. Production organization

- a. Medium-term capacity and short-term organization of the production
- b. Plant distribution – Layout alternatives

8. Operations control

- a. Annual production planning
- b. Cost control system

9. Lean Tools

- a. Lean philosophy and types of waste
- b. Lean tools (SMED, Value Stream Mapping, SOP)

10. Project planning and control

11. External Logistics

12. Practical application of operations in a company

WORKLOAD

| PRESENIAL ACTIVITIES | HOURS |
|---------------------------------------------|--------------|
| Theory sessions | 25.0 |
| Practical sessions | 15.0 |
| Complementary activities | 3.0 |
| Exams | 2.0 |
| Total Presential Activities | 45 |
| NON-PRESENIAL ACTIVITIES | |
| Prepare and research for practical sessions | 22.0 |
| Autonomous work and study | 23.5 |
| Team work | 22.0 |
| Total Non-Presential Activities | 67.5 |
| TOTAL | 112.5 |

TEACHING METHODOLOGY

In general, we will work mainly using the following methodology and didactic resources:

- Presentation in the classroom of the essential theoretical contents, using the master lesson with active and participatory techniques.
- Practical classes related to the resolution of cases, debates, oral presentations, etc., individually and/or as a team.
- Autonomous work based on the implementation of exercises and/or projects individually and/or team, with support tutorial.
- Independent study of the student and conducting oral and/or written tests.
- Practical classes for personal development.

EVALUATION CRITERIA

Student assessments will be conducted through continuous evaluation and synthesis testing:

- Continuous assessment: This part will have a weighting in the final note of 40%:
 - 25% related to the assistance. It will be obtained from the exercises performed and/or presented in class and from the active participation in the sessions.
 - 15% will consist of one or more works that the teacher will request, linked to the development of the operations management.
- Synthesis Testing: This part will have a weight in the final note of 60%.

The continuous evaluation is in-person and non-recoverable. The synthesis testing will be recoverable at the end of the semester.

Class attendance is compulsory for optimal follow-up of the subject, so the absence of more than 15% of the sessions will mean that the student is not qualified for the continuous evaluation part. Consequently, the maximum note that can be achieved will be that obtained in the synthesis test, with the weighting referred to 60%.

To approve the subject must be obtained in the synthesis tests an average of 5 (or more). The final note will be obtained by weighting the average of the synthesis tests (60%) with the continuous evaluation (40%), having to obtain a final qualification equal or higher than 5 to overcome the subject. However, if the synthesis testing (exam) is failed, the final mark obtained after applying the prior weighting will be a maximum of 4.5. Thus, if the exam is less than 5 and after applying the weighting the final mark is greater than 4.5, it will remain at that 4.5. If, on the other hand, this grade is less than 4.5, the grade obtained will be maintained.

Students must comply with the rules of writing, spelling and grammar in the development of their work and their evaluation tests, formal aspects that will be taken into account in the evaluation of the same

Syllabus

2021 - 2022

2nd tuition Students: Students who do not pass the course in 1st/ 2nd call and who do not repeat courses, will have to register again. They will be entitled to 3rd and 4th call. Their evaluation will be:

- Continuous evaluation: 20% of the final note, which consists of a plan of operations of a company where the contents of the work carried out during the course must be included.
- Examination: 80% of the final note.

REFERENCES

Recommended books

- **Heizer, J., Munson, C., & Render, B. (2016).** *Operations management: Sustainability and Supply Chain Management (Global Edition)*. Pearson Education Limited.
- **Goldratt, E. M., & Cox, J. (2012).** *The goal: A process of ongoing improvement (3rd revised edition)*. North River Pr Inc.