UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Operational Management

Academic Year 2026/2027

1. Organic Unit

Faculty of Business and Economic Sciences

2. Course

Sport Organization Management

3. Cycle

1st

4. Course Unit

Operational Management (C1128)

5. Scientific Area

6. Curricular Year

3rd

7. Type of Curricular Unit / Semester

1st Semester

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8. Class type and workload (work time)

Theoretical classes:	
Practical classes:	
Theoretical-Practical Classes	30,00
Tutorial Guidance:	20,00

9. ECTS Credits

6,00

10. Scientific Area Coordinator

11. Regent

Prof. Doutora LUCILA KARMALUK PENA

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

To develop competencies in the field of Operations Management, enabling students to understand and apply the fundamental principles of the area, with an emphasis on critical analysis, process optimisation, and organisational effectiveness.The aim is to highlight the importance of strategic supply chain management, quality, and productivity through the use of decision-support tools, preparing students to address operational challenges in goods and services contexts.

15. Specific Objectives

- Understand operations management in industry and services.
- Formulate operational strategies, evaluating performance trade-offs.
- Map and redesign processes to eliminate inefficiencies.
- Apply demand forecasting, planning and control techniques (MRP, scheduling).
- Implement continuous improvement methodologies (Lean, Kaizen, Six Sigma).
- Use KPIs and operational data to support decision-making.
- Analyze the impact of AI, automation and Industry 4.0 on operations.

16. Skills to be acquired

By the end of the course unit, students will be able to analyse and redesign operational processes, fostering continuous improvement; implement and monitor quality and productivity programmes; strategically manage the supply chain in both service and industrial contexts; apply decision-support tools based on operational data; integrate technologies and innovations into the operational contexts of organizations; promote sustainable and socially responsible practices in operations.

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17. Teaching Methodology

The expository and active-interrogative methods will be used in a systematic articulation, combining expository theoretical classes with interactive debates, practical sessions for developing projects and studying real cases, ensuring the practical application of acquired knowledge, promoting integrated learning so that students can complement theoretical learning with practical experiences.

18. Course Unit Program

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1. Fundamentals of Operations Management
1.1 Importance of operations in business competitiveness
1.2 History and evolution of the operations function
1.3 Differences between goods and services operations
1.4 The operations function and value creation
1.5 Articulation with Supply Chain Management

2. Operational Strategy
2.1 Alignment between operations and business strategy
2.2 Operational trade-offs: cost, quality, flexibility, speed
2.3 Types of operational strategies
2.4 Competitive priorities and performance criteria

3. Processes and Layout
3.1 Types of production processes
3.2 Process mapping and analysis
3.3 Types of layout
3.4 Organization and optimization of production spaces

4. Quality Management
4.1 Principles and importance of quality management
4.2 Quality tools
4.3 Certifications

5. Lean Management and Continuous Improvement
5.1 Principles of Lean Thinking and identification of waste
5.2 Value Stream Mapping (VSM)
5.3 Kaizen and PDCA cycle
5.4 Introduction to Six Sigma (DMAIC)
5.5 Lean applications in service and industrial contexts

6. Production Planning and Control
6.1 Demand forecasting
6.2 Aggregate production planning
6.3 MRP - Material Requirements Planning
6.4 Production scheduling and sequencing
6.5 Inventory management: EOQ models and replenishment policies
6.6 Key performance indicators (KPIs)

7. Technology and innovation
7.1 Industry 4.0
7.2 AI applied to operations

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7.3 ERP and information systems for operations
7.4 Operational resilience and risk management
7.5 Innovations and emerging trends

8. Sustainability in operations
8.1 Sustainability in business operations
8.2 Measuring the carbon footprint in operations
8.3 Social responsibility and responsible operations
8.4 Alignment with the SDGs (SDGs 4, 8, 11, 13, 17)

19. Assessment Methods

The Regulations for the Assessment of Knowledge and Skills currently in force will apply. Under continuous assessment, oral contributions distributed throughout the teaching period and a final written test will be mandatory, both weighted at factor 3. An individual assignment, weighted at factor 2, will also be completed.

20. Didactic Resources

- Books;
- Scientific articles;
- Exercise sheets;
- Case studies;
- Online resources.

21. Sustainability Objectives

To integrate sustainable practices into business plans, contributing to the following Sustainable Development Goals (SDGs):

SDG 4: Quality Education
SDG 8: Decent Work and Economic Growth
SDG 11: Sustainable Cities and Communities
SDG 13: Climate Action
SDG 17: Partnerships for the Goals
These objectives reflect a commitment to sustainable economic growth based on the promotion of creativity and innovation.

22. Keywords

Sustainability
Operations Management
Quality
Processes
Efficiency
Innovation

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23. Main Bibliography

Author(s): Pinto, J. P.
Title: Gestão de Operações na Indústria e nos Serviços
Edition: 4ª Year: 2025
Local: Lisboa
Publisher: FCA / Grupo LIDEL
ISBN Code:

Author(s): Reid, R., & Sanders, N.
Title: Operations Management: An Integrated Approach
Edition: 8ª Year: 2023
Local: Hoboken
Publisher: Wiley
ISBN Code:

Author(s): Heizer, J., Render, B., & Munson, C.
Title: Operations Management: Sustainability and Supply Chain Management
Edition: 13ª Year: 2022
Local: Harlow
Publisher: Pearson
ISBN Code:

24. Complementary Bibliography

Author(s): Krajewski, Lee J. & Malhotra, Manoj K.
Title: Operations Management: Processes and Supply Chains
Edition: 14ª Year: 2024
Local:
Publisher: Pearson
ISBN Code:

Author(s):
Title:
Edition: Year:
Local:
Publisher:
ISBN Code:

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Autor / Author	Prof. Doutora LUCILA KARMALUK PENA
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Colaborador(es) / Colaborator(s	-
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