Course Code	Course Title	ECTS Credits
MABM 550	Operations Management	10
Department	**Semester**	**Prerequisites**
School of Business	Fall, Spring, Summer	None
Type of Course	**Field**	**Language of Instruction**
Core	Operations Management	English, Greek

Objectives of the Course:

The main objectives of the course are to:

- Explain the strategic role of operations management in organizations
- Understand how to design operation systems to support the strategy of the organization and gain a competitive advantage in the marketplace
- Understand the importance of designing and managing effectively the organization's supply network
- Understand the role and key decisions of the operations manager (forecasting demand, capacity management, inventory management, scheduling etc.)
- Understand the implications of managing effectively quality and performance in organizations
- Gain appreciation of the need for continuous improvement and the methodologies for effecting change (students should be able to understand the reasons necessitating change in operations and how to effect such change through both projects and continuous improvement)

Learning Outcomes:

After completion of the course students are expected to be able to:

1. **Assess the role of operations in an organization** (students should be able to discuss and explain the key role of operations in an organization and the various existing interactions with other organization departments)
2. **Formulate a suitable operations strategy to support the overall organization strategy** (using a specific methodology worked in class the students should be able to express the strategy pursued by an organization into specific operation performance objectives)
3. **Design an operations system to support a specific operation strategy** (students should be able to design the various elements of an operations system such as process design, supply network, location of facilities, layout, technology, job

design, lean philosophy etc.)

4. **Assess the key processes involved in operations planning and control** (students should be able to assess the various options available and select the most appropriate ones in order to support a given operation strategy; students should also be able to explain the rationale behind the key decisions of the operations manager)
5. **Analyze an operation, identify its strengths and weaknesses and propose an improvement project to overcome its main weaknesses** (students should be able to apply the main concepts of the course on real operation cases)

Course Contents:

1.0 Introduction to Operations Management and Operation Objectives
- 1.1 Operations as processes
- 1.2 Operation process characteristics
- 1.3 The model of operations management
- 1.4 The strategic role of operations
- 1.5 Operations performance objectives

2.0 Operations Strategy
- 2.1 The four perspectives on operations strategy
- 2.2 Methodology of operation strategy formulation
- 2.3 Balancing conflicting operation objectives

3.0 Process and Supply Network Design
- 3.1 Elements of process design
- 3.2 Process types
- 3.3 Process mapping
- 3.4 Supply network design
- 3.5 Vertical integration
- 3.6 Outsourcing
- 3.7 Location of facilities

4.0 Process layout, technology and job design
- 4.1 Layout Types
- 4.2 Materials-processing technology
- 4.3 Information-processing technology
- 4.4 Customer-processing technology
- 4.5 Ergonomics
- 4.6 Division of Labour
- 4.7 Designing for job commitment

5.0 Capacity Planning & Control
- 5.1 Nature of planning and control
- 5.2 The activities of planning and control

- 5.3 Measuring capacity
- 5.4 Forecasting demand
- 5.5 Approaches to capacity planning and control

6.0 Inventory & Supply Chain Planning & Control
- 6.1 Definition and use of inventories
- 6.2 How much to order?
- 6.3 When to place an order?
- 6.4 Inventory analysis & control systems
- 6.5 Supply chain management activities
- 6.6 Supply chain relationships
- 6.7 Supply chain dynamics

7.0 Enterprise Resource Planning & Lean Operations
- 7.1 Materials requirements planning (MRP)
- 7.2 Manufacturing resource planning
- 7.3 Enterprise resource planning
- 7.4 The lean philosophy
- 7.5 JIT techniques
- 7.6 JIT & MRP

8.0 Quality Planning & Control
- 8.1 Definition of Quality
- 8.2 Conformance to specification
- 8.3 Statistical process control (SPC)
- 8.4 Process variation
- 8.5 Acceptance sampling

9.0 Performance Measurement and Operations Improvement
- 9.1 Measuring and improving performance
- 9.2 Improvement priorities
- 9.3 Approaches to improvement
- 9.4 Techniques of improvement

10.0 Project Planning and Control
- 10.1 Understanding the project environment
- 10.2 Project definition
- 10.3 Project planning
- 10.4 Project control
- 10.5 Real-life feedback

11.0 The Operations Challenge
- 11.1 Globalization
- 11.2 Corporate Social Responsibility (CSR)
- 11.3. Environmental responsibility
- 11.4 Technology
- 11.5 Knowledge management

Learning Activities and Teaching Methods:

Lectures, Case Study Analysis and Discussion, In-Class Exercises and Presentations

Assessment Methods:

Project, Mid-Term Exam, Final Exam, Attendance and Participation

Required Textbooks/Reading:

Authors	**Title**	**Publisher**	**Year**	**ISBN**
Slack, N., Chambers, S., Johnson, R.	Operations Management	Prentice Hall	2010 (6^{th} Edition)	978-0-273-73046-0

Recommended Textbooks/Reading:

Authors	**Title**	**Publisher**	**Year**	**ISBN**
Wright, N., Race, P	The Management of Service Operations	Thomson	2004 (2^{nd} Edition)	1-84480-051-2