

Operations and Information Management

Module Code: DLMBAEOIM

Module Type see curriculum	Admission Requirements None	Study Level MBA	CP 5	Student Workload 150 h
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Semester / Term see curriculum	Duration Minimum 1 semester	Regularly offered in WiSe/SoSe	Language of Instruction and Examination English
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Module Coordinator

Prof. Dr. Philippe Tufinkgi (Operations and Information Management)

Contributing Courses to Module

- Operations and Information Management (DLMBAEOIM01)

Module Exam Type

Module Exam

Study Format: myStudies
Written Assessment: Case Study
Study Format: Distance Learning
Written Assessment: Case Study

Split Exam

Weight of Module

see curriculum

Module Contents

- Preparation of reliable demand forecasts
- Site planning
- Process design and process planning
- Inventory management and production control
- Information systems in the supply chain
- Behavioral operations management

Learning Outcomes**Operations and Information Management**

On successful completion, students will be able to

- apply selected and practice-oriented concepts of operations management in various tasks and draw appropriate conclusions for verifiable performance improvements.
- critically evaluate the benefits and limitations of modern and process-oriented software solutions in operations management.
- consider current and future developments in connection with the megatrends of digitization and climate protection in operations management.
- support the analysis, planning, and design of value-adding processes in supply chains through modern information systems.
- understand and anticipate the behavior of decision-makers and their individual preferences in order to better predict the actual behavior of the supply chain partners and optimize the achievement of own objectives.

Links to other Modules within the Study Program

This module is similar to other modules in the field of Economics.

Links to other Study Programs of the University

All Master Programmes in the Business & Management field.

Operations and Information Management

Course Code: DLMBAEOIM01

Study Level	Language of Instruction and Examination	Contact Hours	CP	Admission Requirements
MBA	English		5	None

Course Description

Operations management comprises the planning, control, execution, and monitoring of all internal company resources and capacities for the manufacture of products and services. This course provides students with the knowledge and skills to apply theoretically-sound and practice-relevant concepts of operations management in the context of different problems and tasks (taking into account central megatrends) and draw process-relevant conclusions for verifiable performance improvements. The consideration of powerful software solutions plays an important role here. Starting from the creation of reliable demand forecasts, different scenarios for the optimal location decisions of companies are considered. The process design defines the basic framework for processes, decision rules, and process performance analyses. This then shows in the subsequent process planning how optimal sequences for orders are calculated under certain priority rules. In inventory management, various models for inventory optimization are considered in order to apply practice-relevant methods for calculating capacities and production plans, taking into account various restrictions. Supply chain management investigates how independent companies can optimally coordinate their activities and promote cross-company communication through the use of sustainable information systems. Concluding the course is an examination of human decision heuristics and preferences and their anticipation of decision behavior within the framework of behavioral operations management.

Course Outcomes

On successful completion, students will be able to

- apply selected and practice-oriented concepts of operations management in various tasks and draw appropriate conclusions for verifiable performance improvements.
- critically evaluate the benefits and limitations of modern and process-oriented software solutions in operations management.
- consider current and future developments in connection with the megatrends of digitization and climate protection in operations management.
- support the analysis, planning, and design of value-adding processes in supply chains through modern information systems.
- understand and anticipate the behavior of decision-makers and their individual preferences in order to better predict the actual behavior of the supply chain partners and optimize the achievement of own objectives.

Contents

1. Introduction to operations management
 - 1.1 Definition, subjects, and tools of operations management
 - 1.2 Operations management under circumstances of conflicting demands
2. Preparation of reliable demand forecasts
 - 2.1 The Forecast Problem
 - 2.2 Qualitative forecasting methods
 - 2.3 Causal and time series forecasts
 - 2.4 Assessment of forecast quality
3. Site planning
 - 3.1 Central problem aspects
 - 3.2 Arbitrary locations and transport costs
 - 3.3 Optimization with pre-determined locations
 - 3.4 Site selection and response times
4. Process design and process planning
 - 4.1 Process types
 - 4.2 Process structure
 - 4.3 Process performance
 - 4.4 Priority rules for planning and controlling processes
5. Inventory management and production control
 - 5.1 Models for optimizing stocks
 - 5.2 Continuous inventory management
 - 5.3 Function and application areas of MRP II and Just in Time
 - 5.4 Methods for optimal planning of capacities and production plans
6. Information systems in the supply chain
 - 6.1 Increased performance through product and process design
 - 6.2 Order policy, demand forecasts, and demand planning
 - 6.3 Hellgrath and Kuhn's three-pillar approach
 - 6.4 Requirements for supply chain information systems
 - 6.5 Market analysis of selected IT systems

7. Behavioral operations management
 - 7.1 Decision heuristics for solving complex problems
 - 7.2 Decision behavior and decision prognosis
 - 7.3 Decision influencing

Literature

Compulsory Reading

Further Reading

- Bozarth, C. C. & Handfield, R. B. (2019). Introduction to operations and supply chain management (5th ed.). Pearson Education Limited.
- Das, A. (2015). An introduction to operations management: The joy of operations. Routledge.
- Hill, A., & Hill, T. (2018). Essential operations management (2nd ed.). Red Globe Press.
- Slack, N. & Brandon-Jones, A. (2018). Operations and process management: Principles and practice for strategic impact. Pearson.

Study Format myStudies

Study Format myStudies	Course Type Lecture
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Information about the examination	
Examination Admission Requirements	BOLK: yes Course Evaluation: no
Type of Exam	Written Assessment: Case Study

Student Workload					
Self Study	Contact Hours	Tutorial	Self Test	Independent Study	Hours Total
110 h	0 h	20 h	20 h	0 h	150 h

Instructional Methods		
<input type="checkbox"/> Learning Sprints®	<input type="checkbox"/> Review Book	<input type="checkbox"/> Sprint
<input checked="" type="checkbox"/> Course Book	<input type="checkbox"/> Creative Lab	<input type="checkbox"/> Interactive Online Lecture
<input type="checkbox"/> Vodcast	<input checked="" type="checkbox"/> Guideline	
<input checked="" type="checkbox"/> Shortcast	<input checked="" type="checkbox"/> Live Tutorium/Course Feed	
<input checked="" type="checkbox"/> Audio	<input type="checkbox"/> Reader	
<input type="checkbox"/> Exam Template	<input checked="" type="checkbox"/> Slides	

Study Format Distance Learning

Study Format Distance Learning	Course Type Online Lecture
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Information about the examination	
Examination Admission Requirements	BOLK: yes Course Evaluation: no
Type of Exam	Written Assessment: Case Study

Student Workload					
Self Study	Contact Hours	Tutorial	Self Test	Independent Study	Hours Total
110 h	0 h	20 h	20 h	0 h	150 h

Instructional Methods		
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