

t.OMA2 - Operations Management 2

Person responsible for the course:	Andreas Klinkert, klnk
Credits:	4
Valid for:	2011/2012
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Learning objectives:

The students

- have an overview of the relevant topics and concepts of tactical and operational Operations Management ("operational OM")
 - know basic issues, decisions and objectives as well as possible solution approaches in the different areas of operational OM
 - are acquainted with several quantitative methods of operational OM, in particular in material requirements planning (MRP), lot sizing, inventory management and shop floor scheduling
 - are able to implement and apply certain quantitative procedures and elementary optimization models in a spreadsheet
 - are capable to adequately assess real-world problems from the practice of operational OM, to approach them systematically and analyze them qualitatively as well as quantitatively, and to identify suitable methodological approaches and tools for their solution
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Course content:

Operations Management (OM) basically deals with an enterprise's operational systems and processes, i.e. the central value-generating business areas responsible for the creation and delivery of products and services. Principal functions of OM are the "design", "operation" and continuous adaptation and "improvement" of these areas. Quantitative Operations Management (cf. Operations Research) is concerned with the analysis and optimization of specific problems of OM by means of mathematical models and methods.

Operations Management 2 principally covers the tactical and "operational" areas of OM which shape the day-to-day business and comprise the mid- and short-term planning and control of the operational processes. After giving a overview of the relevant themes of operational OM, the various topics are discussed in detail and illustrated with examples. Furthermore, methodologically oriented chapters provide insight into the quantitative techniques of operational OM. The course comprises in particular the following subjects:

- Production planning and control: overview
 - Aggregate planning: sales & operations planning, master production scheduling
 - Detailed planning: material requirements planning (MRP), capacity requirements planning (CRP)
 - Lot sizing
 - Inventory management
 - Shop floor scheduling and control
 - Lean production & just-in-time (JIT)
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Previous knowledge:

Knowledge of the course "Operations Management 1" is recommended but not mandatory.

Teaching method:

Type of lesson:	Number of lessons per week:
Lecture	14 x 2L
Tutorial/Practicum	14 x 2L
Group teaching	
Block instruction	
Seminar	

Assessment:

According to the table or as specified in writing by the lecture at the beginning of the semester!

Number	Type	Weighting
1	End of term exam	100%
	Exam during the semester	
	Further assessments	

Language of instruction:

German

Instruction material:

- Course slides (PDF)

Recommended literature:

- Jacobs, F.R., Chase, R., Operations and Supply Chain Management, 13th Edition, McGraw-Hill/Irwin, 2010 (classical text book in OM, optional for illustration and extension of the course material)

Comments:

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