

<b>VT Logistics &amp; Supply Chain Management</b>	
<b>Code:</b> IM4CHM:VT	
<b>Lecturers</b> Prof. Dr. Michael Krupp Prof. Dr. Sabine Joeris Prof. Dr. Florian Waibel International guest lecturers	<b>Module Coordinator</b> Prof. Dr. Michael Krupp
<b>Intended Learning Outcomes</b> <p>Students will be able to identify and describe the interrelation between purchase, production and distribution processes within organisations. They will be able to clarify the functions of purchase and procurement divisions and illustrate how these divisions affect the operating efficiency of a corporation. They will know different approaches to identify the determination of requirements and will be able to decide which approach suits best within a given business case. Students will be able to calculate the prospective material consumption based on the bill of materials and past values. They will be familiar with different production types, will be able to identify them by typical characteristics and deduce their demands on logistical processes. They will be able to illustrate work flows in process charts and analyse them in terms of shortage and critical path.</p> <p>Students will know the difference as well as the different challenges of industrial production and the goods and services in the service sector. They will know the queuing problem and the effects of different influencing variables on the waiting time in a service system. They will know the opportunities to optimise a service system and be able to generate improvements independently.</p> <p>Students will know the trends that are required by intra-company and company-wide (across company) process management (Supply Chain Management-SCM). They will be able to clarify and illustrate incidental challenges in the internal context. Students will know generic models (reference model) and be able to use them to explain and structure chain processes.</p> <p>Students will be able to name the elements of a logistical system and reflect (their) interdependencies. They will know the interdependencies of elements and how their input can be planned and controlled purposefully. They will view logistics as a cross-sectional function and be able to derive requirements from this and transfer them to different application fields/companies. They will know the reference framework of company-wide processes and be able to describe logistical tasks in the sense of SCM.</p> <p>Students will know the different levels of the supply chain process and their connections. They will know the different perspectives of logistics and SCM and the linked expectations of and challenges facing the tasks of logistics and SCM in the operational context. They will be able to clarify and illustrate this. They will know different framework conditions for logistics and SCM arising from different industries and will be able to describe and specify the resultant requirements placed on logistics and SCM.</p> <p>They will be able to pin optimisation approaches and methods to the perspectives in question sectorially and apply them on the basis of the challenge/task.</p> <p>Students will know general optimisation approaches based on their knowledge of processes and elements of logistical systems. They will be able to evaluate the effectiveness of optimisation approaches and to work out conceptual optimisation approaches that are tailored to a particular challenge.</p> <p>Students will be able to answer logistical questions purposefully within the framework of a project (in teams). They will be able to report about the progress of a project and to make statements about the selection and impact of the chosen measures.</p> <p>Students will know the pros and cons associated with the outsourcing of a production and/or service process and will be able to deduce them for a specific business case. They will understand the outsourcing approach and be able to describe how to identify the appropriate supplier as well as being able to set up a standard case call for bids and to evaluate the response. Furthermore they will know how to calculate the base price and the break-even point. Students will have the ability to</p>	

compare the costs of in-house production with those in a supplier's proposal and make their decision based on quantitative and qualitative factors. They will know different pricing strategies with regard to the outsourcing of logistical processes and will be able to compare them in terms of favourable characteristics in the context of a given situation.

Students will be familiar with the concept of a service-level agreement and will also be able make a suggestion for a suitable SLA within a specific business case. They will know key operating figures for evaluating and controlling suppliers and will also be able to decide which are mandatory in a specific case.

**Content**

**Courses in the Module**

- SCM Basics (2 contact hours, Prof. Dr. Michael Krupp)
- SCM Optimisation (2 contact hours, Prof. Dr. Michael Krupp)
- SCM Practice (2 contact hours, Prof. Dr. Michael Krupp)
- Outsourcing & Controlling (2 contact hours, Prof. Dr. Sabine Joeris)

**Detailed Course Description**

- Basics of logistics & supply chain management
- Three meanings of logistics – from classical transport logistics to the management of flow systems
- Logistics market and its sub-segments
- Elements of a logistical system
- Supply chain management reference models
- Supply chain management optimisation approaches (horizontal, vertical, sequential supply chain management integration, reduction in complexity, lean management)
- Methods of supply chain management (management of existing supply chains, supply chain management, supply chain risk management, quick response/ECR, custodian warehouse & VMI, push-/pull-approach, JiT/JiS)
- Outsourcing
- Contract logistics
- Purchasing process
- Procurement controlling – tasks & tools: static and dynamic investment calculation, break-even analysis, ceiling price calculation, value benefit analysis, supplier profiling analysis, total cost of ownership, supplier lifetime value, purchasing balanced scorecard, KPIs)
- Pricing strategy
- Success factors in the outsourcing of logistical processes
- Strategies of contract logistics companies
- Service level agreement and contract arrangement

**Teaching & Learning Methods**

- Lectures
- Case studies
- Simulation games (e.g. beer game)
- Assignments and presentation
- Field trips and practical lectures

**Media**

Presentation materials / flipchart / metaplan board / information graphics / presentation software, e.g. PowerPoint.

**Relation / Interface to other Modules**

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**Additional Information**

<ul style="list-style-type: none"> <li>• The course is divided into lectures and compulsory workshops</li> <li>• Valuable research may be published in the faculty's own study series</li> </ul>
<b>Literature</b> <ul style="list-style-type: none"> <li>• Scripts by lecturer</li> <li>• Standard literature (defined at the beginning of each semester or adjunct to lecture)</li> <li>• Further literature will be announced at each lecture</li> </ul>

**Organisation**

<b>ECTS Credits</b> 12	<b>Contact Hours</b> 8	<b>Language of Instruction</b> English
<b>Type of Module</b> Study focus	<b>Offered</b> Winter semester	<b>Duration</b> 1 semester
<b>Semester of Study</b> 3 <sup>rd</sup> year, 5 <sup>th</sup> till 7 <sup>th</sup> semester		
<b>Prerequisite for Participation</b> See §6 Study- and Examination Regulations		
<b>Recommended Requirements</b> <ul style="list-style-type: none"> <li>• Read the books</li> <li>• Study notes taken in class</li> <li>• Participate in the lecture</li> </ul>		
<b>Total Workload and Breakdown of Credits</b> 12 ECTS credits: 360 hours, made up of:		
<b>Course Attendance</b>  120 hours	<b>Preparation / Homework / Self-study</b>  120 hours	<b>Time for Exercises and Group Work</b>  ---
<b>Semester Project / Presentation Preparation</b>  60 hours	<b>Exam Preparation</b>  60 hours	<b>Duration of Examination</b>  90 minutes
<b>Prerequisite for Award of Credit Points</b> <ul style="list-style-type: none"> <li>• Written examination</li> <li>• Additional presentation and/or project work during the semester</li> </ul>		
<b>Examination Requirements</b> Written examination Course work Presentation	<b>Weighting in Examination</b> Written examination: <ul style="list-style-type: none"> <li>• 25% basics</li> <li>• 25% optimisation</li> <li>• 25% practice</li> <li>• 25% outsourcing &amp; controlling</li> </ul>	